THE ARCHITECT & BUILDING NEWS

IN THIS ISSUE

- STUDIES AT BRYANSTON SCHOOL
- WOKINGHAM SCHOOL: DEVELOPMENT PROJECT
- SECONDARY SCHOOLS: A.A. SYMPOSIUM

NOVEMBER 27, 1952 · VOL. 202 · NO. 4380 · ONE SHILLING WEEKLY

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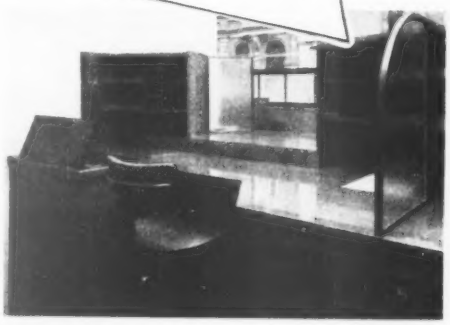

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GLASS WALLS *in the new Austin Extensions...*

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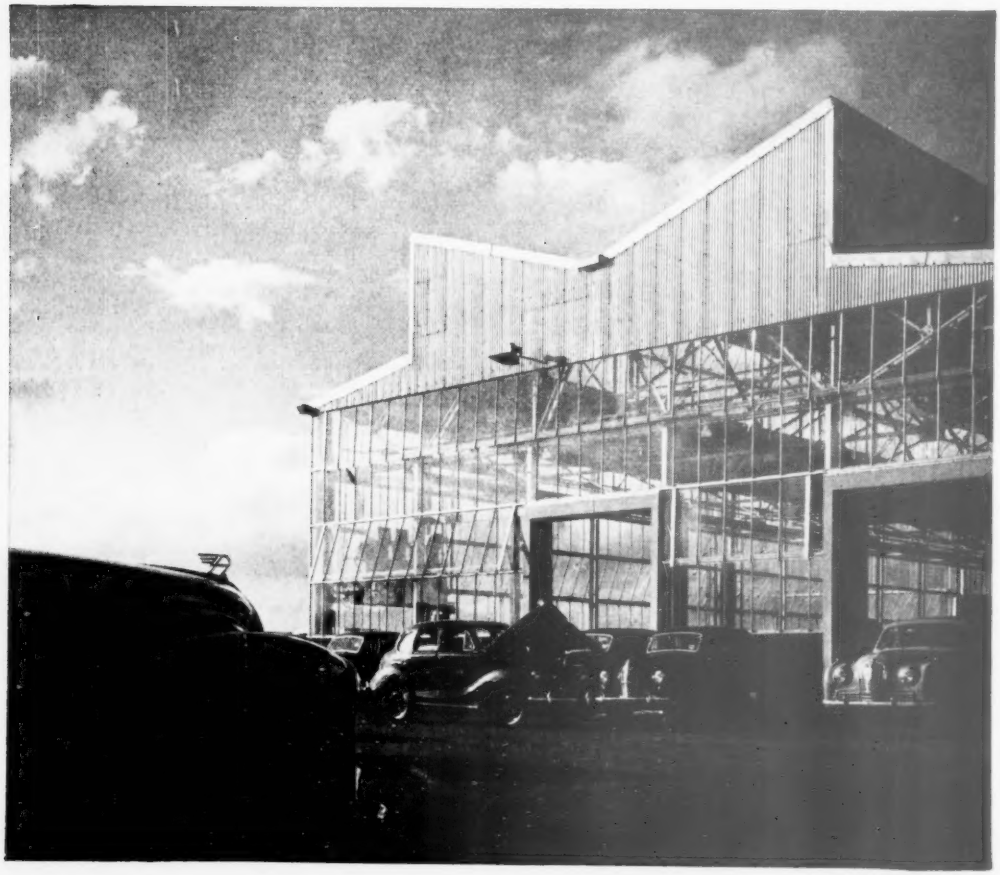
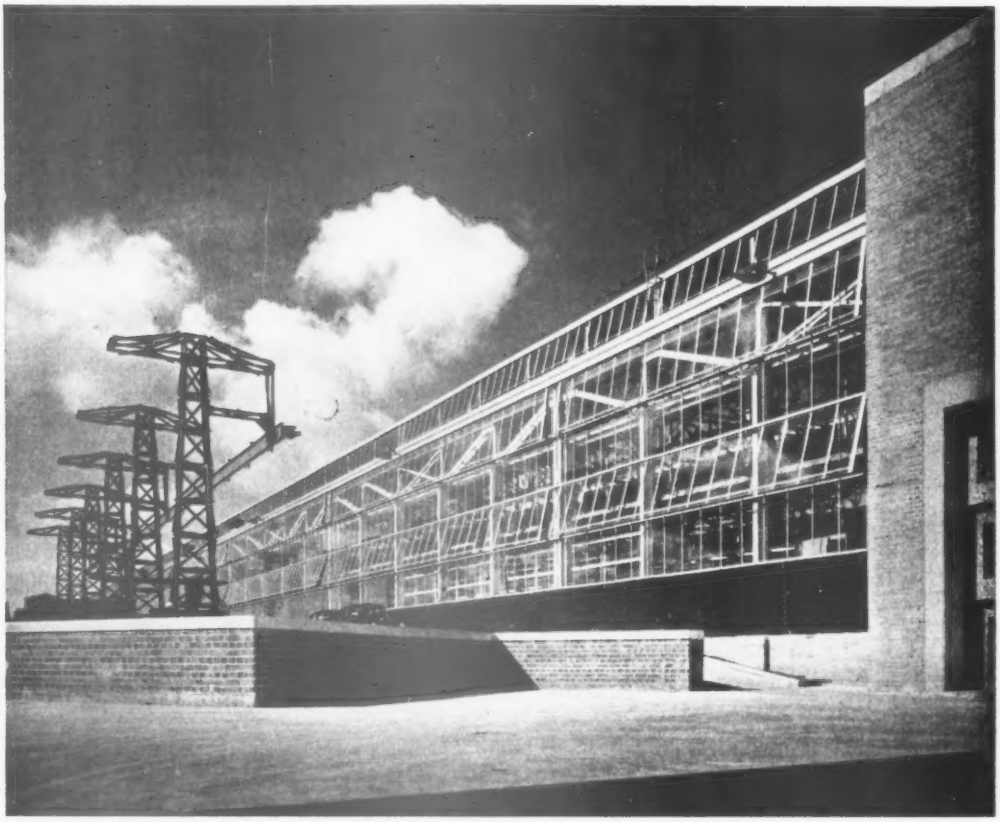
Our pictures show Aluminex Patent Glazing to advantage and the æsthetic effect of the 900 ft. glass wall is a tribute to architect C. Howard Crane's use of this medium in his new Car Assembly Building at the Austin Factory, Longbridge. Strong enough to resist the full force of Atlantic gales, durable enough, like Piccadilly's Eros, to stand the wear of years, light enough to be handled with ease, clean cut and attractive in its lines — Aluminex is a working material for architects to conjure with.





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The 900 × 20ft. wall of glass can be dismantled and re-assembled when the time comes for further extensions. This is only one of the important advantages offered by Aluminex.

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Opening lights 5ft. deep by 58ft. run into two tiers along the whole length of the building. Each pair of adjacent lights is easily operated by Teleflex gear from one manual control at floor level, 116ft. of sidewall opening in 15 seconds. Teleflex — a new development in cable gearing — was originally used for turret operation on bombers and battleships in the last war. It is a classic example of how the swords of war become the ploughshares of industry.

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Both the sidewalls and the monitors are glazed with 32 ounce clear sheet glass, which, combined with the delicate aluminium tracery of Aluminex Patent Glazing, has produced a delightful effect of airiness and spaciousness. In all, 56,000 square feet of glass were used in the cladding of this building.

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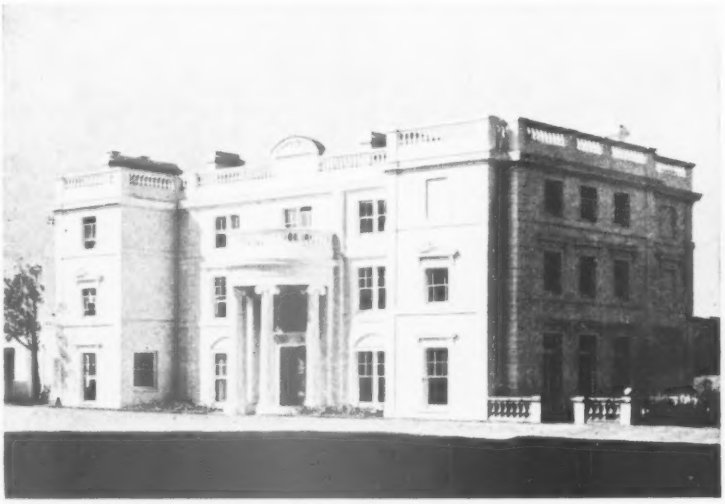

FULMER HALL, BUCKS

The building depicted above is Fulmer Hall, one of the research laboratories of Monsanto Chemicals, Ltd.

The surface of the building is a previously decorated cement rendering. After being made good it was given a priming coat of Cemprover No. 1 mixed with equal parts of water.

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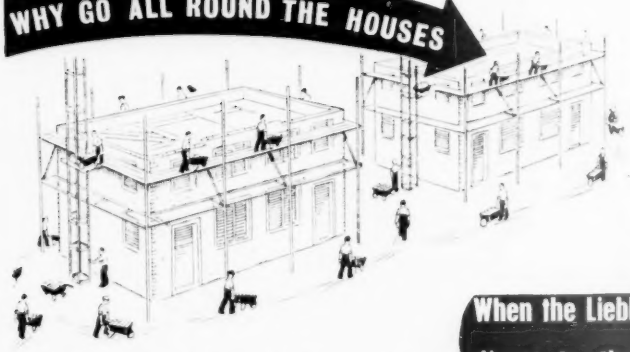

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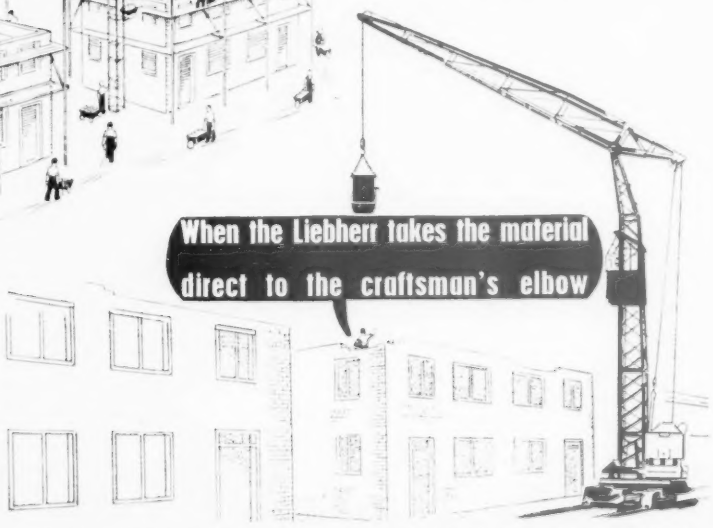

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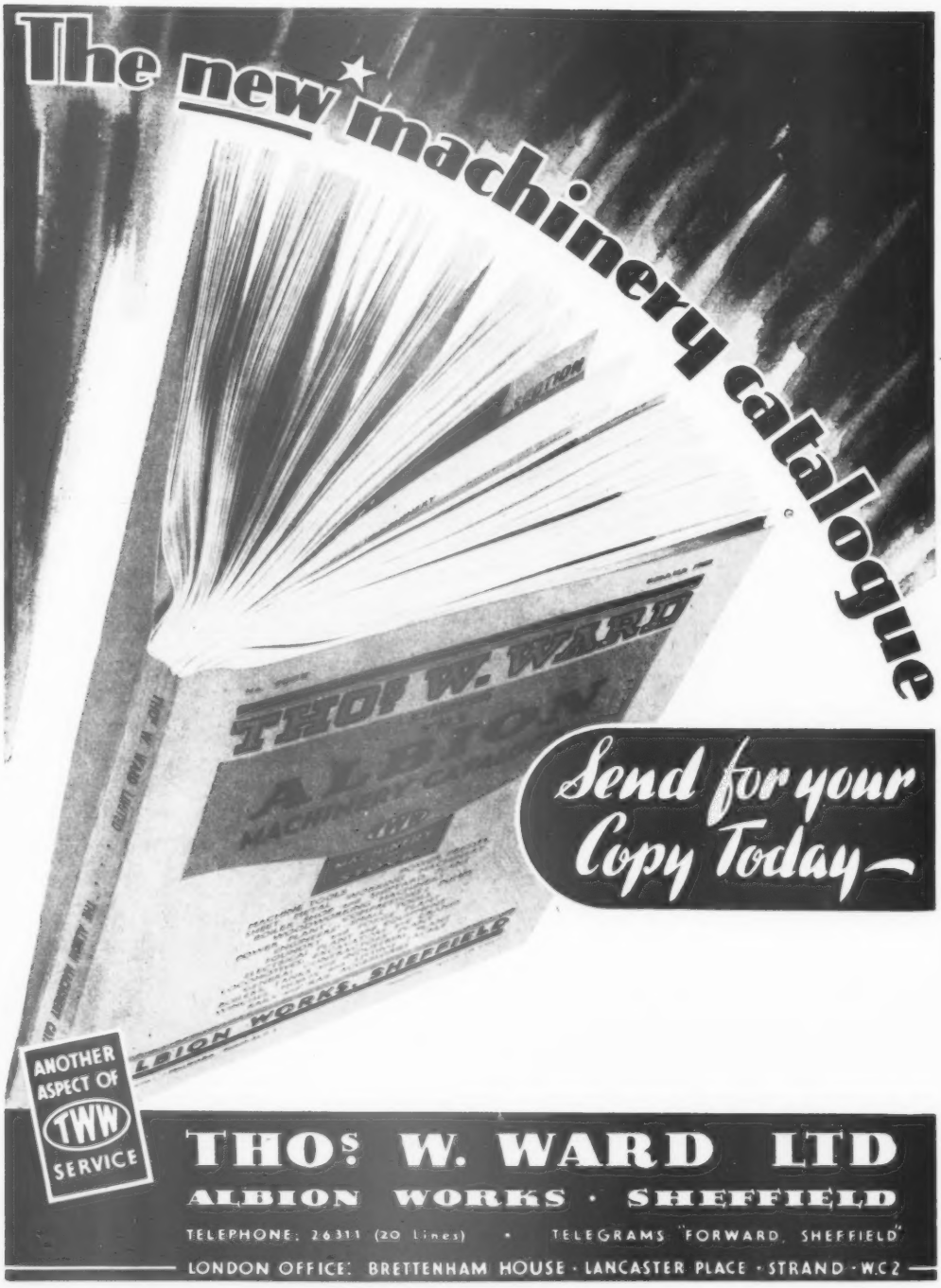
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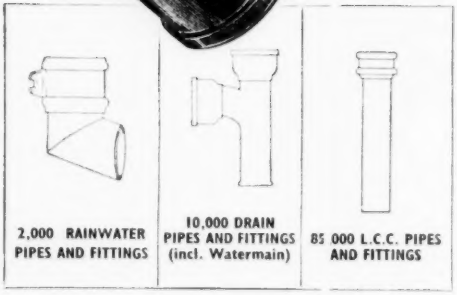

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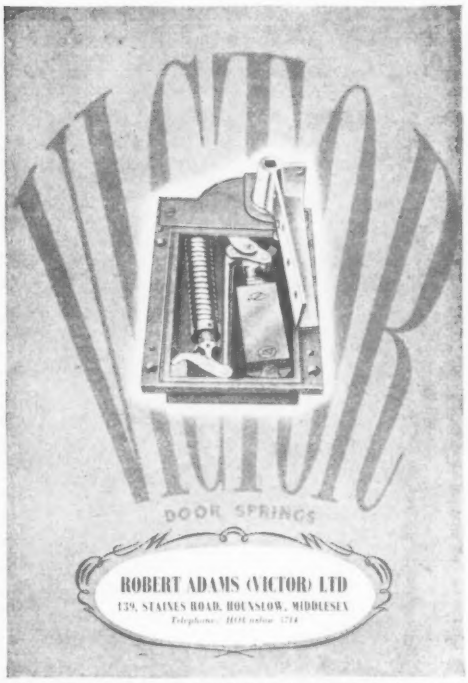
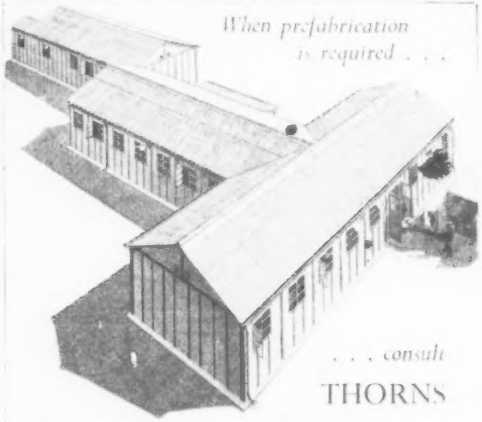


Victor Door Springs are installed in the Royal Festival Hall



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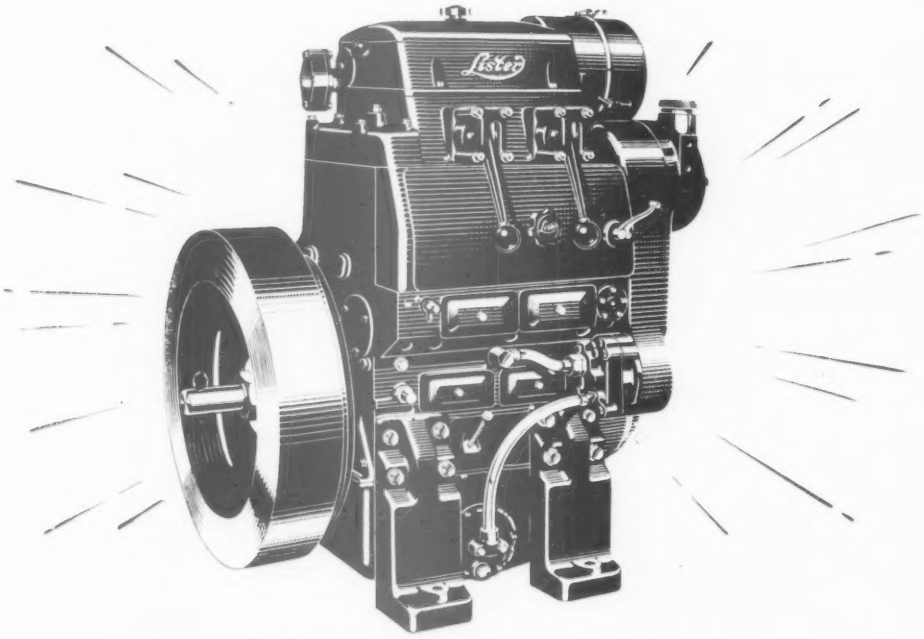

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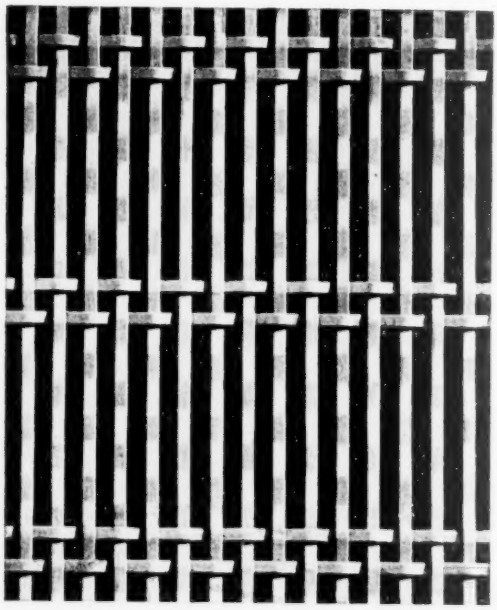

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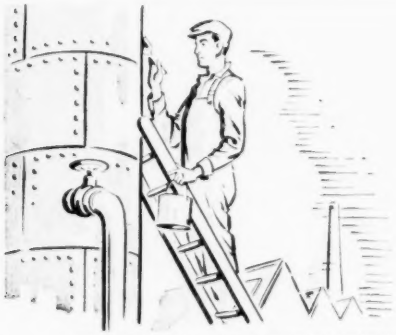

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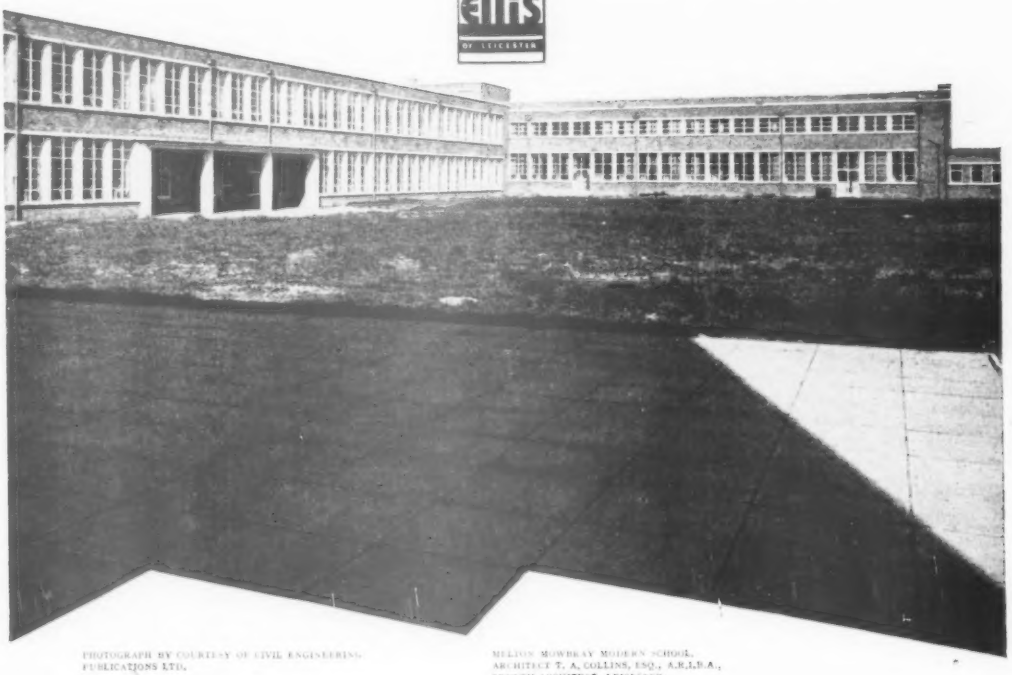

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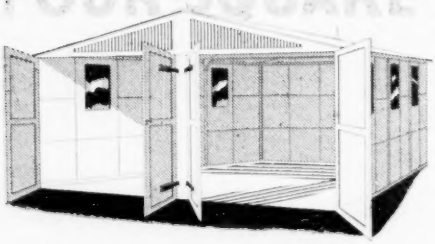

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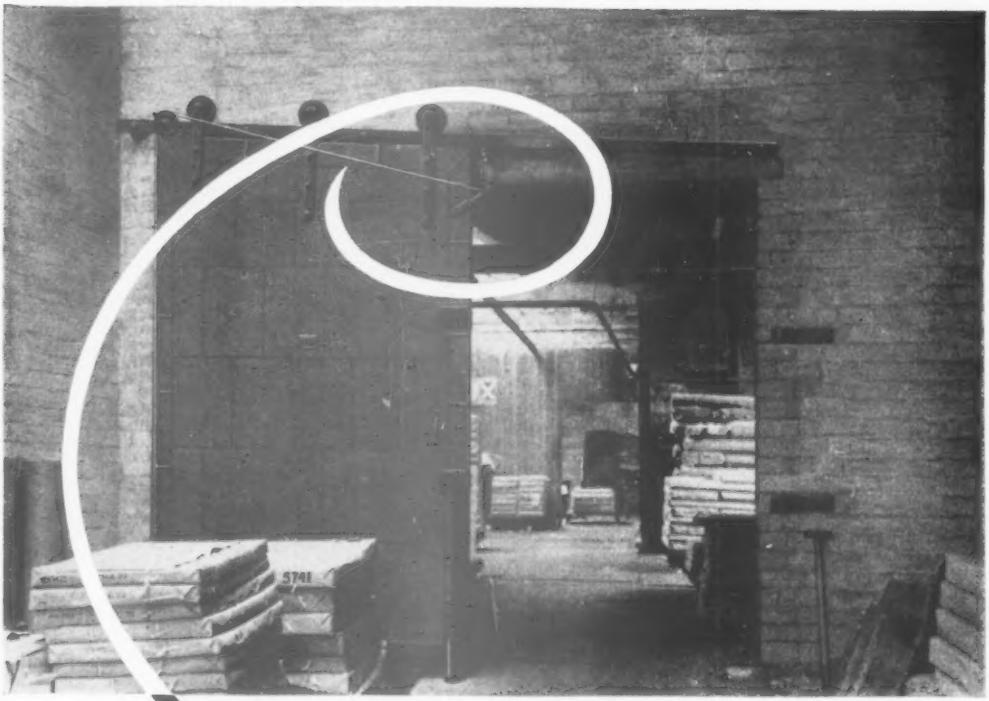

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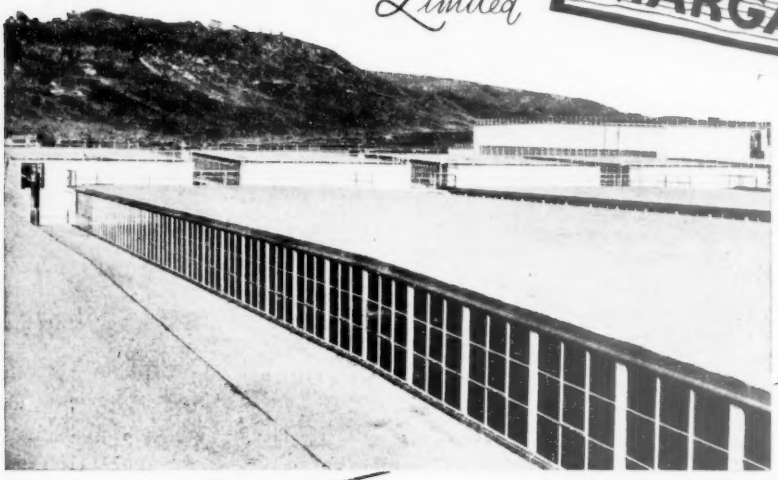

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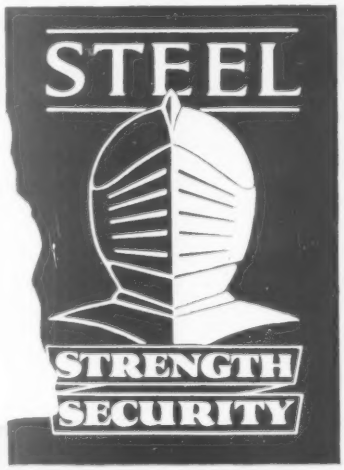

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Vol. 202 No. 4380

THE ARCHITECT & BUILDING NEWS

November 27, 1952

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CORONATION ARCHITECTURE

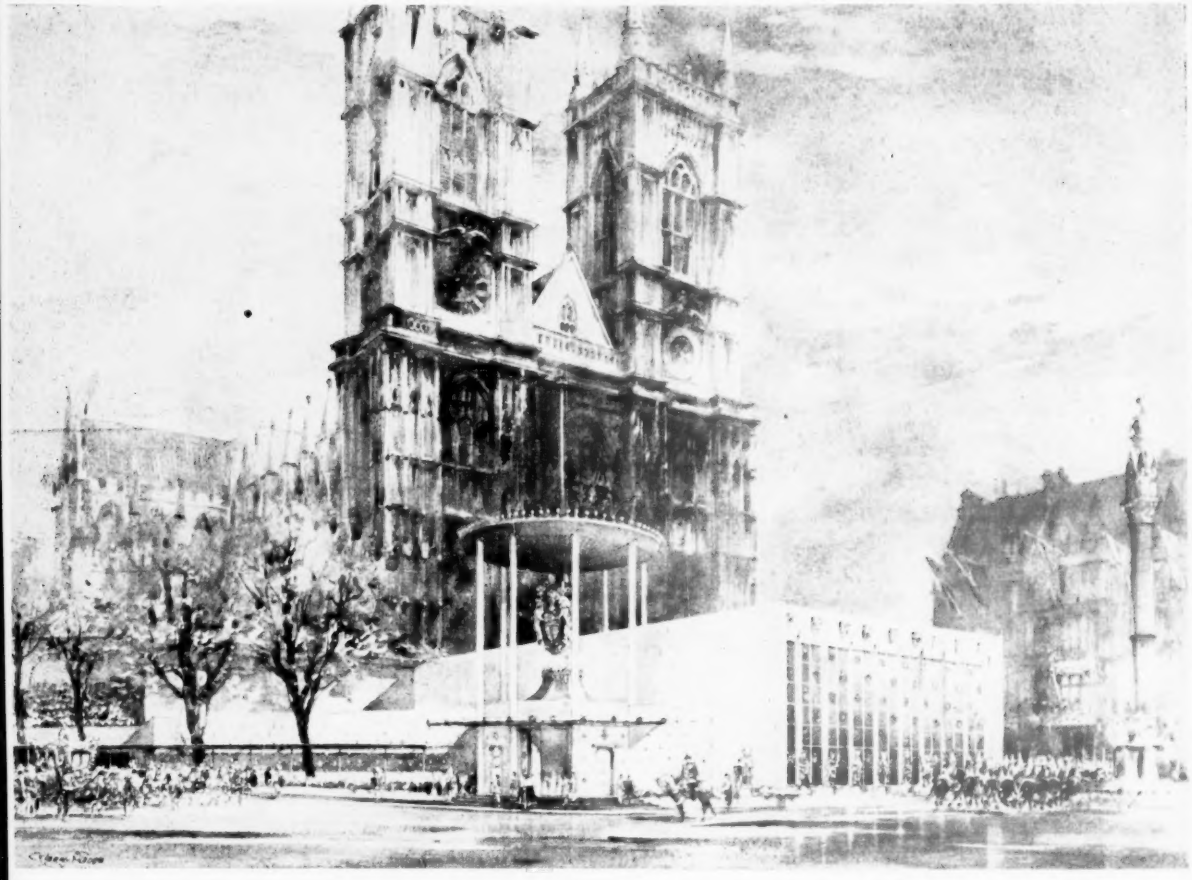
THE Minister of Works has told the Press and the world something of his detailed plans for the streets and the Abbey to be made fit for the elaborate ceremonial and setting of the Coronation next June.

The feature of these preparations which will be of particular interest to architects is the traditional Annex to be erected at the West-end of Westminster Abbey. Its practical function is to mark the point of Royal arrival and departure and to provide assembly space for the Abbey procession to the "theatre" at the east-end, together with robing rooms and refreshment facilities. Its position in relation to the surrounding road-space and traffic requirements, both for the coronation and before and after that occasion, in relation to the existing trees and the necessity for the provision of ample visibility for spectators of arrivals and departures from the Abbey, all make the design of this annex and its immediate temporary surroundings a planning problem of considerable and complex difficulty. No plan has been released by the Ministry of Works, but we hope to be able to publish one in a later issue, as we think it should have considerable interest for architects and planners.

The first annex was erected in this position in 1831 for the coronation of William the Fourth, and since then there have been four others. They have always been the responsibility of the Board or the Ministry of Works, though the advice of Sir Edwin Lutyens was sought for the last one to be erected; it was rather a plain and dull affair. The previous designs have varied from the almost tent-like structure of 1831 to the fake film-gothic of 1911, when an attempt was made to create a temporary structure as indistinguishable from the revivalist-gothic of Wren's west front as possible. Doubtless these differences of outlook about a problem reflect the times in which they occurred, but, even so, whenever the problem does reoccur it becomes a new test for the architectural taste and outlook of a period. It is as if designers were asked, every generation, to go back and redesign one of their earlier architectural works; "if I only had my time over again" is a wish many would avoid under such circumstances and it is as well, perhaps, that for this problem, the personnel has changed for almost every occasion.

It is, of course, always a little unfair to comment on any architectural or sculptural work of art before it is built or is in position, but with the models and photographs of the new Annex before us perhaps we may be allowed the privilege of early comment. There is no doubt that the design has been made with an open mind and without too much influence from what has gone before and this is to be welcomed. The design is gay, though some of its parts are box-like and unlidded; its decorative elements have a verticality which echo in a modern way the rising lines of the Abbey. Yet its underlying attitude of mind seems to be one that turns its back on its gothic surroundings and relies, in a broad way, on classical forms and proportions, a catholicity which is, perhaps, as expressive as any other of our time.

The whole design is governed by a certain smallness of scale and multiplicity of parts which may be held to be in line with its surroundings, though some would say that scale is also gained by breadth and simplicity and contrast and that these attributes should control both the parts and the whole. We have no doubt that the sculptured elements which have been introduced will be well handled; Mr. James Woodford is a good choice, for his excellent free handling of heraldic devices has been seen on many occasions in the past. Here, however, we must bring general comment down to detailed criticism; are not the "Queen's beasts" placed too low? Although their aggregate height is some 10 to 12 feet, they are still virtually at ground level, and will, we fear, tend to be



Ministry of Works Photograph, Crown Copyright Reserved

Westminster Abbey Annex provides accommodation for the reception of the Queen by the Earl Marshal, and for the Peers. A large assembly space is required for the formation of the procession with facilities for robing, etc. The form of the structure to be employed is one of light tubular steel frames, asbestos and felt roof, with timber and hardboard cladding to walls. The building consists of three elements, entrance, hall and ancillary rooms which are expressed in the design. The Annex has been designed by the Chief Architect's Division, M.O.W., Chief Architect: Eric Bedford, A.R.I.B.A., Junior Architect-in-Charge, Willicm S. Bryant, A.R.I.B.A. The perspective is by Terry Pledge.

lost amid the brilliance of a passing procession or behind the drabness of a post-coronation crowd of sightseers. The "King's beasts" at Hampton Court are, of course, the inspiration for this appropriate device of a traditional protection of heraldic supporters; but Henry the Eighth's beasts were the decorative features of broad open approaches or were placed in a garden layout and were not set low to be seen within the crowded conditions of a city's streets. The tall west-window of the Annex, with its engraved devices surmounted by the shields of the Commonwealth and the great canopied Royal Arms will be much better seen by most people.

The various stands that will line the route will all be erected or in hand by the beginning of March. The total number of seats in the stands for which the Ministry of Works is responsible will be 100,000 and the Minister has announced that two-thirds of these will be allotted to National Organizations representing all the most important aspects of British life. Each of the organizations will receive a block of seats and will then be responsible for allotting the tickets to their representatives in their own way. We understand that the R.I.B.A., as one of the representative organizations, will know the numbers of seat allocations made to it, in January; the distribution task before the Council will not be an enviable one nor is the method to be adopted obvious, though the cost of a seat (£4 and £6) may tend somewhat to reduce the field. We can only suppose that getting a seat will be like entering for an architectural competition; which, incidentally, makes us wonder what would have resulted from an open architectural competition for the Coronation Annex to Westminster Abbey—would it have been more expressive of the times or less?

EVENTS AND COMMENTS

SOLID FUEL

The Coal Utilization Council gave a party last week to launch a new leaflet on domestic hot water supply. Mr. H. V. Shelton, chairman of the British Ironfounders Association spoke, as chairman of the C.U.C. technical committee, on the merits of solid fuel appliances. Although the purveyors of the three main fuels have all been known to cry that their particular brand is the most economical for this and that form of heating, there seems to be little doubt now that, properly used, solid fuel is cheapest in the long run for domestic use, always provided that it is made to work efficiently. The best way to use solid fuel, says the C.U.C., is to make it do at least two jobs, and if possible, three. The type of cooker which heats the bath water and warms the kitchen seems to be, economically, the ideal appliance. The current need for economy in fuel consumption is in many ways unfortunate for the development of alternative fuels, as there is no gainsaying that to turn a switch is more convenient than to carry a hod of ashes downstairs and hod of black diamonds up again. Economy in fuel is vital and a national fuel policy is urgently needed if disaster is to be averted. At present, as far as I can see, there is very little co-ordination between the solid fuel, gas and electrical propagandists. Perhaps the Ridley report will produce something. Meanwhile the nearest thing to co-ordination which I have met is that gas and electricity share a floor at the Building Centre.

U.N. MONUMENTS

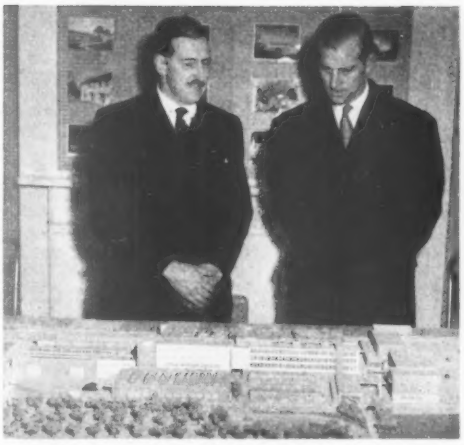
I have often said that I am not in favour of monuments as such. By this I mean that I do not like to see large groups of bronze figures of uncertain artistic merit scattered all over our cities. It is therefore with real pleasure that I read that Carl Milles, the famous Swedish sculptor, is to design an U.N. monument consisting of a stainless steel arch 130ft high with a span of 450ft, complete with water and lighting effects. On top of this arch there will stand a 35ft figure symbolizing "The Genius of Light." I welcome this monumental U.N. monument.

Sweden is also in the news for producing a lock with 4,000,000,000 000 combinations and someone has rightly pointed out that no man on earth need have the same key. This seems a smart idea but on second thoughts it might be a shade inconvenient if it were put into practice.

A.A. MEMBERS' SKETCHES

This year the word "Holiday" has wisely been left out of the title of this exhibition for what was originally a record of architects holidays has in recent years become almost a salon of architects painting.

There was, as usual, much talent to be seen in a variety of techniques. The work of such artists as Hugh Conyer, John Greene and Marjorie Morrison, is always a pleasure to see, but this year I missed Olive Sullivan. Of the other annual exhibitors there were the customary water colour tours-de-force of Julian Leathart, the Westwoods, and Frank Hoar. Comparative newcomers included a pleasant group of oils by John and Elizabeth Eastwick-Field and John Stillman. These architectural partners appear to have started their own painting school, and very pleasant, too.



H.R.H. The Duke of Edinburgh with Mr. Frederick Gibberd during his visit to Harlow New Town on November 17.

THE COLUMN GROUP, ALTRINCHAM PARK

This Society has been formed with its headquarters at Altrincham Park, an 18th century mansion near Shrewsbury, to stimulate local interest in architecture and the allied arts. The house stands four miles outside Shrewsbury and combines, under one roof, an adult college, National Trust rooms and a private residence.

The season's programme of the group consists of five lectures, two have been given, the remaining speakers are Ove Arup, Robert Matthew and Grenfell Baines.

Societies whose objects include the stimulation of interest in architecture are very much to be welcomed, particularly when they show in their choice of speakers that they mean contemporary architecture. Particulars of membership may be obtained from the Hon. Sec., Miss J. M. Broadbent, A.R.I.B.A., The Column Group, Altrincham Park, Column House, London Road, Shrewsbury.

INSTITUTE OF CONTEMPORARY ARTS

To-day the I.C.A. is holding the first of a series of meetings on contemporary architecture. A contemporary building will be discussed at each meeting, and the architects concerned will be there to answer questions. J. M. Richards will be in the chair. The first meeting will discuss the Pimlico flats. The meeting is at the I.C.A. at 8.30 p.m. to-night.

The M.A.R.S. group has revived this type of meeting with a discussion on some new buildings which Edward Mills has designed in conjunction with Ove Arup for May & Baker.

HAMMERSMITH SCHOOL EXHIBITIONS

The Hammersmith School has had three exhibitions in the last year, and although their type has varied somewhat the bulk of the material shown in the exhibit of the department of architecture has been seen before—and

ARCHITECT TO THE L.C.C.

Dr. J. L. Martin, M.A., Ph.D., F.R.I.B.A., was appointed Deputy Architect by the London County Council in July, and took up his duties on October 11, 1948.

During his architectural training at the Manchester University School of Architecture, Dr. Martin won the R.I.B.A. Soane Medallion and the Silver Medal for recognized schools. He was also a University Travelling Scholar and studied in France, Germany, Switzerland, Italy and Spain.

From 1930-1934 Dr. Martin was Assistant Lecturer and Master of Design at the university of Manchester, and from 1934-1939 he was Head of the School of Architecture in Hull. During these years he also carried out work in private practice. This work included private houses, housing schemes, schools, the design of a youth centre in Lincolnshire, industrial work and furniture and industrial design.

From 1939 until taking up his present duties, Dr. Martin was employed as Principal Assistant Architect by the former London, Midland and Scottish Railway (now British Railways). In this capacity he took a general responsibility for many types of work, including canteen building, station building, station reconstruction schemes and hotel work. In 1946 he travelled to America for the L.M.S. to make special studies of developments in planning, construction and materials.

His numerous publications include Science and Building, a paper for the British Association, and The Flat Book—a handbook of Furniture and Furnishing compiled in collaboration with his wife who is an architect and industrial designer. He is a contributor to a number of journals of technical and architectural interest and edited "Circle."

Dr. Martin married in 1934 and has two children. He takes a keen interest in the development of the arts and when he can find the time he takes an active interest in recovering and re-growing disappearing varieties of British fruit trees.

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commented on on this page. One room of the present exhibition, however, deserves special mention. A series of screens has been arranged to show the many types of knowledge which an architect must have. I did not count them but there must have been twenty. This display was very well presented and should be shown to all would-be architects and to all clients.

As a whole, the exhibition was impressive because of its vast size and variety. The many departments had vied with each other to produce a good show. The amount of work done to put the exhibition on—with a minimum of money—was prodigious. The exhibition is billed to close to-day, but I understand that it may be kept on for another week.

PRE-SPUN PRESSURE PIPES

I hear that the Stanton Ironworks, which has been making spun concrete pipes for thirty years, hopes to have spun prestressed concrete pressure pipes in production within two years. These pipes will satisfy the present requirements of the B.S.I. for cast-iron pipes of the same dimensions. They will have longitudinal prestressed reinforcement as well as being wrapped externally. The former imparts compressive stress to the concrete to enable it to withstand the stresses due to the external winding after spinning. Spun prestressed lamp standards are also being made by Stantons; they have recently been subjected to M.o.W. tests, but the results will not be known for some weeks. The company's new designs may be awaited with interest as their former ones were among the best looking of their kind.

FIRE AND PRESTRESSED CONCRETE

From time to time we have heard statements by uninformed persons on the alleged "explosive" danger from prestressed concrete units in the event of fire. Such a statement recently appeared in the *Empire News* under the heading, "'Death-trap' shock for builders." The statement put prestressed concrete in a very bad light, more particularly as it purported to quote the director of the Fire Research Station in support of the allegations. The Prestressed Concrete Development Group took the matter up, and established that the *Empire News* statement was not a correct record of what the Director of the Fire Research Station had said. The Director then wrote to the Editor of the *Empire News* pointing out that the report of the interview was misleading and had already had repercussions in the form of letters of complaint from responsible bodies concerned with the use of prestressed concrete. The Director requested that the record of the statement should be removed from the libraries of the Kemsley Newspapers or alternatively that a note should be circulated to all libraries pointing out that the statement was not true and should not be used for reference.

In reply the Editor undertook to remove the record of the statement from the Kemsley libraries.

New techniques are always in danger of misrepresentation in one way or another by reporters looking for sensational new stories, and no matter how careful those with the knowledge are, they are frequently misunderstood and then misquoted.

ABNER

NEWS OF THE WEEK

Building Licensing

The Minister of Works, the Rt. Hon. David Eccles, M.P., answering questions in the House on Tuesday, November 18, 1952, said:—

I have three changes to announce in the licensing system for building. Early this year the volume of maintenance work of all kinds showed signs of falling off. From July 1 last the free limit for housing and general work was raised from £100 to £200 in a period of twelve months, but this did not arrest the decline.

I now propose to alter the licensing period to the calendar year. This change will help painters and other building workers for whom there is usually less work in the winter.

The current licensing period, for which the limits are £500 for industrial and agricultural buildings and £200 for all other buildings, will be brought to an end on December 31 next. This means that the full amounts will be available during the period of six months.

For the calendar year 1953 the free limits will be for industrial and agricultural buildings £2,000 and for all other buildings £500.

I propose to discuss with the Associations of Local Authorities how we can take full advantage of the savings in administration which these changes make possible.

A.A. Carnival

The A.A. Carnival (*for members only*), organized by the Students' Club, will again be held at 34-36 Bedford Square on Friday, December 19. "Bill of fare" as before: Country Dancing, Pantomime, Films, Ballroom Dancing, Refreshments and Bar. Festivities will begin at 7.30 and end at 2 a.m. "All-in" tickets, which *must* be obtained in advance: 17s 6d double, 15s single.

The L.C.C. to consider High Paddington

At a meeting of the London County Council held on November 18, Mr. Norris Kenyon, Leader of the Opposition, asked the Chairman of the Housing and Town Planning Committees whether their attention had been drawn to the proposed development scheme to house some 8,000 people, known as High Paddington, and whether they would arrange for the scheme to receive careful consideration from the Committees, particularly in its technical and financial aspects, and to report thereon to the Council. Replying by arrangement with the Chairman of the Housing Committee, Mr. Fisk, Chairman of the Town Planning Committee stated that the Officers of the Council had been instructed to report on the scheme, but obviously it would take some time to consider a project of this complexity.

A magnificent model of this project is on view at the "Elizabeth to Elizabeth" Exhibition in aid of the National Playing Fields Association which opened at Hutchinson House, Stamford Place, Oxford Street to-day. The model of High Paddington finds itself with a model of the Comet Jet Aircraft and Atomic Piles. The Exhibition will be open for two weeks.

Notes from the Minutes of the R.I.B.A. Council Meeting Held on November 4

Appointment. The Hertfordshire Society: R.I.B.A. Representative on General Council. Mr. Hope Bagenal, F.R.I.B.A., re-appointed.

R.I.B.A. Architecture Bronze Medals: The Leicestershire and Rutland Society of Architects

The Council gave formal approval to the award for the four years ending December 31, 1950, by the Jury of the Leicestershire and Rutland Society of Architects, made in favour of the Science Block Building at Leicester University College, designed by Messrs. Pick, Everard, Keay and Gimson (Martin Gimson, T. W. Haird, F.R.I.B.A., Kenneth Arundel, A.R.I.B.A., and Hugh Smith, A.R.I.B.A.), Mr. T. Shirley S. Worthington, F.R.I.B.A., of Messrs. Thomas Worthington & Sons, F./F./A.R.I.B.A., being consultant.

Government Economy Measures: The Building Research Station

At a previous meeting, it had been decided to send an expression of concern in regard to proposals to reduce the staff at the Building Research Station as part of the Government's economy campaign, and assurances were asked from the Department of Scientific and Industrial Research that all precautions would be taken to avoid making cuts which would interfere with the vital research in progress on behalf of the building industry.

The Council considered a reply explaining that some reduction in manpower and financial resources was inevitable, and giving assurances that care had been taken to maintain a future programme of research basically the same as at present, though there might be a slight retardation in the routine progress. It was also stated that the resources allocated to building research totalled about one-seventh of the whole available to the Department, and that building research came second only to the work of the National Physical Laboratory.

The reply was noted.

1956 Olympic Games

Olympic authorities in Melbourne have called for designs for the 1956 Olympic Games swimming and diving pools in an Australia-wide contest to select an architect to build them.

The Games organization has already selected an architect for the £A1,100,000 main Olympic stadium in a similar contest.

The Olympic pools, to be built in Fawkner Park, within five minutes' drive of the centre of the city, will seat 6,000 spectators and will cost a maximum of £A350,000, including £A60,000 for plant.

A panel nominated by the Royal Australian Institute of Architects, which is co-operating in the contest, will select five finalists. Each will be awarded £A400, and the winning entrant will get the commission to build the pools.

Conditions call for a roofed building to house the main pool, diving pool, and spectator stands. The main pool will measure 50 metres by 20 metres, and the separate diving pool, also to be used for water polo, will be 20 metres by 30 metres, with a depth of 4½ metres. Other features of the pools will include a restaurant seating 200 in a garden setting, changing rooms to accommodate 1,000 men and 750 women, one main club room of 1,600 square feet and six club rooms each 400 square feet in area—these may be used for Press and radio representatives during the Games.

Provision for filtration, heating and underwater lighting of pools.

The competition is open to architects registered in Australia. Entries close on December 17.

COMING EVENTS

The Housing Centre

December 2 at 1.15 p.m. Talk on "Decoration and Maintenance of Council Houses," by Miss M. Empson, M.A., F.S.H.M., Ministry of Housing and Local Government, at 13, Suffolk Street, Haymarket, S.W.1.

The Institution of Structural Engineers

December 11 at 6 p.m. Talk on "Prestressed Concrete Bridges and Other Structures," by Donovan H. Lee, at 11, Upper Belgrave Street, S.W.1.

Royal Society of Arts

December 3 at 2.30 p.m. Talk on "Italian Renaissance Gardens," by G. A. Jellicoe, F.R.I.B.A., President, International Federation of Landscape Architects. (Selwyn Brinton Lecture.) At John Adam Street, Adelphi, W.C.2.

Town Planning Institute

December 4 at 6 p.m. Talk on "Planning and the Public," by The Rt. Hon. Lord Silkin (Hon. V.P.), at The Livingstone Hall, Broadway, Westminster, S.W.1.

EXHIBITION

An exhibition of photographs of Post-War Architecture in Britain, taken by Colin Westwood, A.I.B.P., A.R.P.S., and John McCann, A.I.B.P., A.R.P.S., is being held at the Ilford Gallery, 106/7, High Holborn, until 31st December.

The Liverpool Architectural Society Annual Dinner

THE Liverpool Architectural Society held its Annual Dinner in the Bluecoat Chambers on November 14. The Bluecoat Chambers, which was at one time the home of the Society, was worthy of support as a centre of Arts in Liverpool, said the President, Mr. F. J. M. Ormrod.

A bomb destroyed part of the building, including the Concert Hall; the damage has now been physically repaired by rebuilding to match the old work. Externally this policy has resulted in restoring the æsthetic quality of the building as a whole. Internally something has gone. In the Concert Hall where dinner was held the curve of one long wall with its arched windows has been retained. These windows were the sole source of light in the old room. It was said during the dinner, by one who is qualified to know, that the natural lighting in the old hall was adequate. But even if more light were required the solution of obtaining it by the great skylights in a ceiling now broken up by cross beams cannot be called satisfying.

The room is paying its way and is approved by the general public. Many architects will disagree. Nevertheless, the Society are happy to be back in their old quarters.

An excellent dinner, well served with appropriate liquid accompaniment, was followed by a short, humorous speech in typical Robertson style by the President of the R.I.B.A., who proposed the Toast of the Liverpool Architectural Society. But apart from some relief much later in the evening from Sir John Hobhouse, pro-Chancellor and President of the Council, University of Liverpool, the standard of speech making was laboured and lengthy.

Mr. Howard Robertson, P.R.I.B.A., said he always regarded Liverpool as an independent state and felt like some inferior foreign potentate when visiting the City. The President reminded his audience that Liverpool had under construction the finest building in the world—the Cathedral. In a tribute to Sir Giles Scott, Mr. Robertson said that whereas that other fine building St. George's Hall had almost killed its architect, Sir Giles was still going strong.

Referring to traffic congestion in Liverpool—"we have it in London, too"—the President reminded architects of their responsibility in the solution of the problem. Architects should get together to solve it. Why should office buildings not start on first floors with parking space beneath or shops not be on the ground floor as now with garage and parking on 1st floors. The major problem to-day, Mr. Robertson said, was circulation.

Sir David Maxwell Fyfe proposed "The City of Liverpool" and admitted that the Lord Mayor must be tired of responding to this Toast. However, after being wrongly announced by the Toastmaster, the Lord Mayor, Alderman Albert Morrow, rose to his task and perhaps gave a hint to following speakers by saying that at such a late hour most people were apt to make mistakes. The hint was not taken.

Alderman Sir Alfred Shennan proceeded to the toast of "The Guests" at great length and with much of the innuendo for reduced controls and great speed of building directed at (presumably) the Government.

One questions whether after dinner speeches are really the occasion for this trailing of coats. But perhaps the big shots know best and certainly architects will listen to even longer speeches if it means work and responsibility for the profession. But the gospel should be preached to the laymen who do not yet appreciate the architects' potential contribution and not to architects who are only too well aware of the scope which more freedom would give.

The Liverpool Society, like other allied Societies, takes under its banner the branches of the North Staffordshire Architectural Association, the North Wales Architectural Society and the Southport Architectural Society. Whether the Presidents of the Branch societies should be seated at the top table on these occasions and the possibility of branch presidents being offered the Presidency of the parent body at stated intervals is a topic which might receive consideration with a view to fostering the corporate relationship of parent and branch societies. There is certainly a feeling in some branch societies that such innovations would be welcomed if only as gestures.

The advantages of homogeniety which accrue to a City centred society are greater than those of a branch which covers large county areas where meetings are difficult to organize. A greater centralization would perhaps lead to greater unity.

C.C.

London Builders' Conference

All builders on the Kent County Council's approved list have been asked to sign a declaration against restrictive practices. Two-thirds have done so; the others will be retained on the list but will not be invited to tender work for the Council until they do sign.

Alderman B. J. Pearson, of Broadstairs, chairman of the County Council Building Committee, told the K.C.C. on Wednesday: "To counteract the activities of the London Builders Conference, the Royal Institute of British Architects recommended that its members should require every contractor tendering to sign a declaration in the following terms:— We declare we are not parties to any scheme or arrangement:—

(a) under which we communicate the amount of our tender to any other person or body before the contract is let; (b) under which any other tenderer for the works, the subject of our tender is reimbursed any part of his tendering costs; (c) under which our tender prices are adjusted by reference directly or indirectly to the prices of any other tenderer for the works. No provision is made in our tender price for any such reimbursement or adjustment, or any contribution thereto.

"In view of the unsatisfactory tendering and other disturbing circumstances, the Buildings Committee decided (in January 1952) that the recommendation of the R.I.B.A. should be adopted as regards building and engineering works exceeding the value of £3,000 to be carried out for the Council. The contractors on the Council's approved list of building contractors were subsequently written to, to ascertain whether they were prepared to sign the declaration. As a result, the members will be interested to know that approximately two-thirds of the firms on the approved list are prepared to sign the declaration when invited to tender.

"Further reports were submitted to the Buildings Committee by the County Architect at its meetings in June and October this year, and the committee have decided that the names of the contractors who have not indicated their willingness to sign the declaration be retained on the Council's approved list of building contractors for the time being, but that they be informed that they will not be given an opportunity of carrying out any work whatsoever for the Council until they undertake to sign the declaration when invited to tender."

One of those who will not sign the declaration is Mr. Leslie Wallis of the Maidstone Borough Council Housing Committee, who is a member of the council of the Southern Conference which is allied to the L.B.C.

Told of the Council's decision, Mr. Wallis said: "I think the action of the County Council is damnable. It is a gross infringement of the builder's liberty. The L.B.C. does not put up building costs by one penny. Unlike the architects and surveyors we have no price-ring. I sent back the County Council form, saying: 'Nothing on earth will induce me to sign.'

"If what we are doing is wrong, why doesn't the Minister order an inquiry by an independent body as we have suggested. All the leading builders in the Home Counties are members and there have been very few resignations in the last year."

Asked what was the attitude of the Maidstone Council, Mr. Wallis replied: "Speaking as chairman of the Housing Committee I would have no personal objection to any member of the L.B.C. tendering although some of the committee members might disagree with me."

* * *

CHANGE OF ADDRESS

Messrs. H. S. Goodhart-Rendel and Partners announce that as from November 17, 1952, their new address will be Kirkland House, Whitehall, S.W.1. Tel. Whitehall 8286/7/8.

IN PARLIAMENT

Near Freedom on Repairs

The Minister of Works announced three changes in the licensing system for repair and maintenance work. He said that early this year the volume of maintenance work of all kinds showed signs of falling off. From July 1 the free limit for housing and general work was raised from £100 to £200 in a period of 12 months, but this increase did not arrest the decline. He now proposed to alter the licensing period to the calendar year. This change would help painters and other building workers for whom there was usually less work in the winter. The current licensing period, for which the limits were £500 for industrial and agricultural buildings and £200 for all other buildings, would be brought to an end on December 31. This meant that the full amounts would be available during the period of six months. For the calendar year 1953 the free limits would be for industrial and agricultural buildings £2,000, and for all other buildings £500. He proposed to discuss with the associations of local authorities how full advantage could be taken of the savings in administration which these changes made possible. Mr. Stokes commented that this meant virtually no limit in private building repairs, and put up the allowance for industry by 300 per cent. How much extra labour, he asked, would be required for each of these two groups, and where would it come from? Was the Minister satisfied that the necessary materials, including steel, would be available in sufficient quantities? Mr. Eccles said he did not think these increases would do more than arrest the decline in repairs and maintenance. In July and August the local authorities gave licences for housing repairs for £3,500,000 and only refused licences for £58,000. There was not point, therefore, in maintaining this apparatus of control. On materials and labour it followed that if the volume did not increase—and he did not think it would—there would not be any more materials used. In any case he hoped that all sections of the industry would economize in materials which are scarce.

Mr. Stokes again asked what calculations had been made of the probable absorption of labour, and where would it come from. Mr. Eccles replied that the point was that he did not want more men falling out of work because there was not a balance between maintenance and new construction, and he believed this step in freedom would preserve a balance.

Mr. Gibson suggested that as there was practically no unemployment in the building industry these steps would inevitably detract from the labour and materials for the housing programme. Mr. Eccles answered that the change meant they could get rid of an apparatus of control without injuring the building industry. Unemployment was showing signs of increase, and precisely in the fields of maintenance and repairs. If the maximum amount of productivity was to be obtained then all sections must have the prospect of sufficient work. (Nov. 18.)

Rebuilding the Blitzed Towns

The 1953 reconstruction programme for bombed sites has been announced. Mr. Marples, Parliamentary Secretary to the Ministry of Housing and Local Government, stated that, excluding London, there were 18 severely damaged cities generally known as the blitzed cities. The value of reconstruction work actually done, sponsored by successive Ministers of Planning, had been as follows:— 1949 and 1950, £2.3 millions; 1951, £3.5 millions; 1952, £4.5 millions (estimated).

Work in progress, due to be done during 1953, would be about £2 millions. The Government had agreed to authorize additional work of some £2½ millions to be done during 1953, making a target of £4½ millions.

The extent to which this additional work can be carried out in 1953, he stated, will depend on conditions in each area, and starting dates must be so arranged as to make no interference with more urgent building work, for example houses and industrial projects and schools. The purpose will be to keep the labour and materials available in each area fully employed. This must result in some inequality as between different cities, but it seems better to proceed on this basis than to insist upon an equal sharing of hardship.

All this will be arranged in the normal way through the regional officers of the Ministry of Works in consultation with the representatives from the Ministry of Housing and the Ministry of Labour.

The Minister can assure the House that, subject to the Government's policy of building more factories and houses, the commercial and amenity buildings so eagerly desired by our blitzed cities will proceed as fast as labour and materials allow. The allocations to be made to individual cities, in accordance with principles set out above, will be announced very shortly. (Nov. 18.)

Controls Gone

Sir John Crowder asked the Minister of Works how many Statutory Instruments he had made during the past 12 months abolishing or moderating existing controls. Mr. Eccles said that the number was seven, four abolishing price controls on building materials, two removing minor controls on brickmakers, and sand and gravel producers, and one raising the free limit for building without licence. He intended to make in the near future the order defining the new free limits. (Nov. 18.)

Cottage Improvements

Mr. Erroll asked why no increase in the building licence quota for a particular area was specifically allowed for the improvement of cottage property by means of improvement grants under the Housing Act, 1949, as amended by regulations in 1952. Mr. Marples stated that all local authorities had been informed that any suitable applications which they could not license within their quotas should be referred to the Ministry's regional officers to see if a licence could be granted outside the quota. (Nov. 18.)

Cost of Condensation

Sir Wavell Wakefield asked the Minister of Housing and Local Government why £210,000 was provided in the Estimates to remedy excessive condensation, etc., in houses built under the Housing (Temporary Accommodation) Act, 1944. Mr. Marples, the Parliamentary Secretary, explained that it was to meet the cost of remedial works in certain temporary bungalows outside the scope of ordinary maintenance. (Nov. 18.)

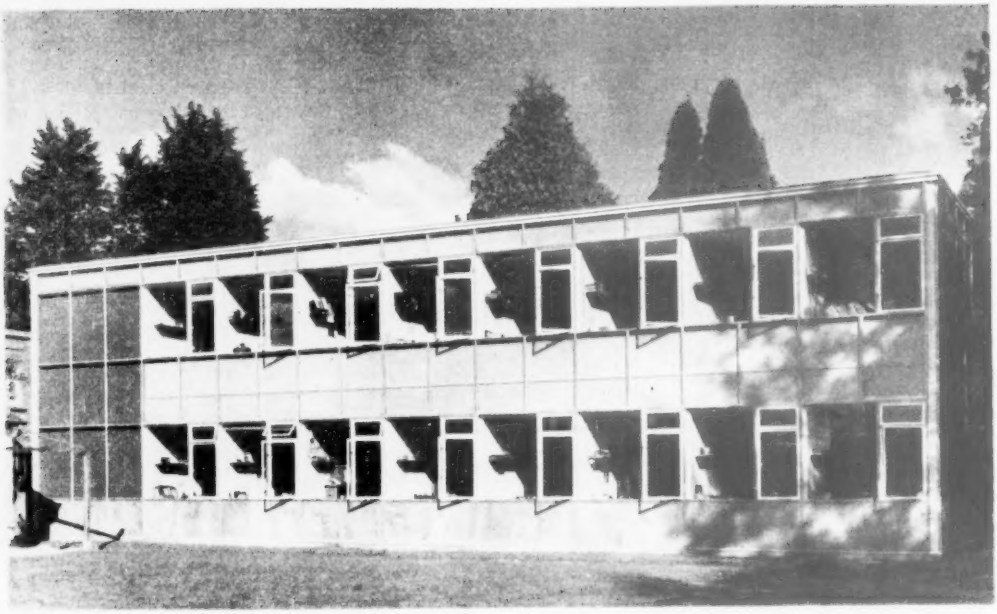
Spotlight on Minor Work

The attention recently drawn to the activities of the London Builders' Conference has turned the spotlight on other aspects of building charges. On Nov. 20 Mr. George Thomas drew attention to national schedules of day work charges for general work. These schedules, he said, were described as being authorized by agreement between the Royal Institute of Chartered Surveyors and the National Federation of Building Trade Employers. Members of the public associated the agreement with authority, although there was no legal authority for it.

The National Property Owners' Association were agitating for increased rents to meet the higher cost of housing repairs, but the issue need never be accepted if the Government were prepared to intervene in this matter, where the cost of building repairs was being inflated by "greedy men." The rate of profit had gone up much more than the cost of materials and wages. Where labour costs did not exceed £200 builders were adding an extra 40 per cent of wages costs to cover their overheads. Materials supplied from stock obtained at wholesale prices were charged at retail rates. A further 10 per cent was added for handling the material to do the job, and also a charge for storage and waste of materials. On top of all this the builder added a 10 per cent addition, which gave him a total profit on any job of roughly 108 per cent. This was little short of legalized robbery, to which the Government could not be indifferent.

Mr. W. T. Williams supported this with specific details of a bill he recently received from a builder for £10, which he analysed on much the same lines as Mr. Thomas's charges to show that the builder made £6 1s profit in that amount.

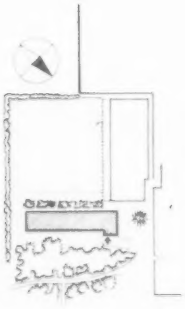
(*Continued on page 646*)



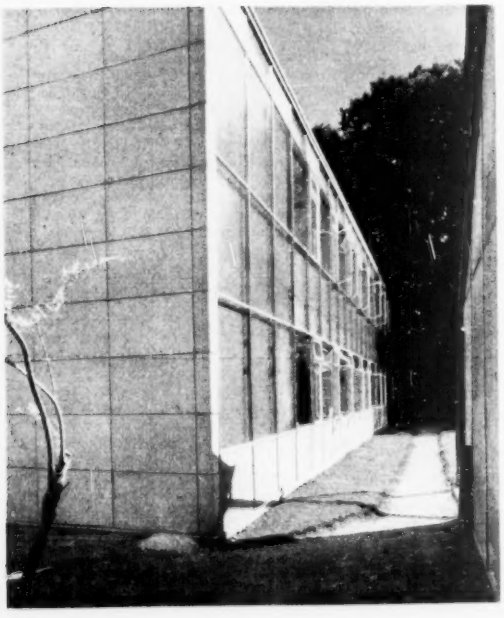
The South-west front. Clinker block panels behind the glass are coloured :—top, pale grey; centre, pale blue and pale grey below. Panels on the left are dark grey.

STUDIES AT BRYANSTON SCHOOL

designed by
ARCHITECTS' CO-OPERATIVE PARTNERSHIP



BLOCK PLAN

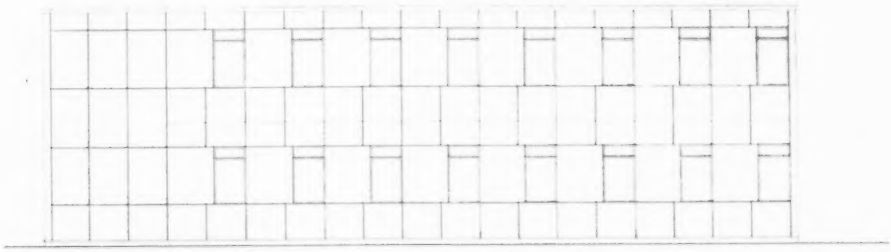


This view shows precast cladding on side walls.

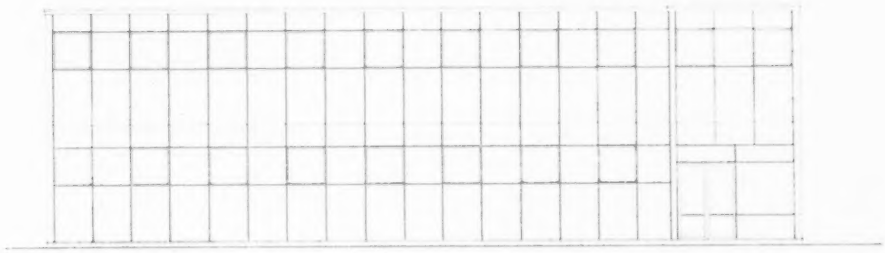
THIS building has been put up as an experiment in order to study, under site conditions, a new structural cladding system which is to be used for certain local authority school buildings. The building is designed to provide sixteen studies, each to house two boys; there are eight studies on each of the two floors.

Construction

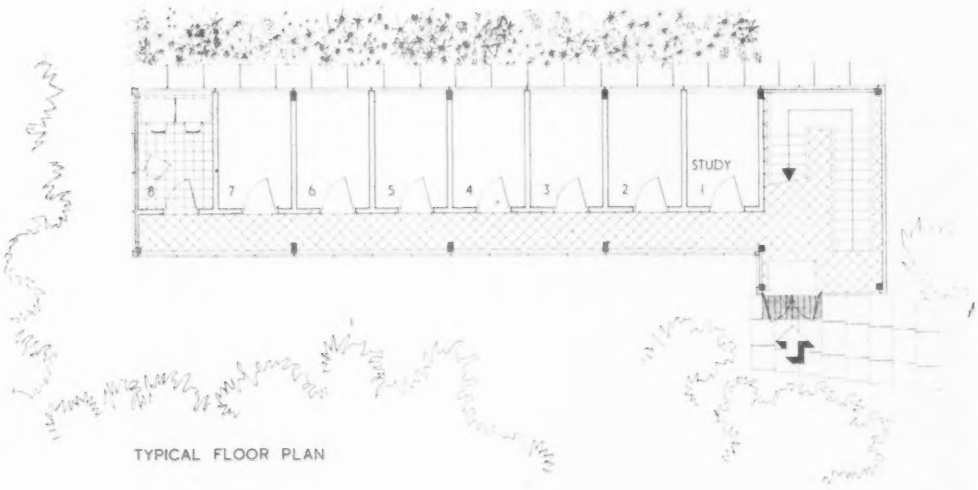
The framework is the same as the one being used for the secondary school at Wokingham which is discussed in this issue in an article by L. W. Elliott. The cladding is constructed as follows: Galvanized mild steel glazing bars of T section are fixed (at 3ft 4in centres with the web of the bar facing inwards) at ground level on to a steel plinth and at floor and ceiling levels with



SOUTH WEST ELEVATION



NORTH EAST ELEVATION



TYPICAL FLOOR PLAN

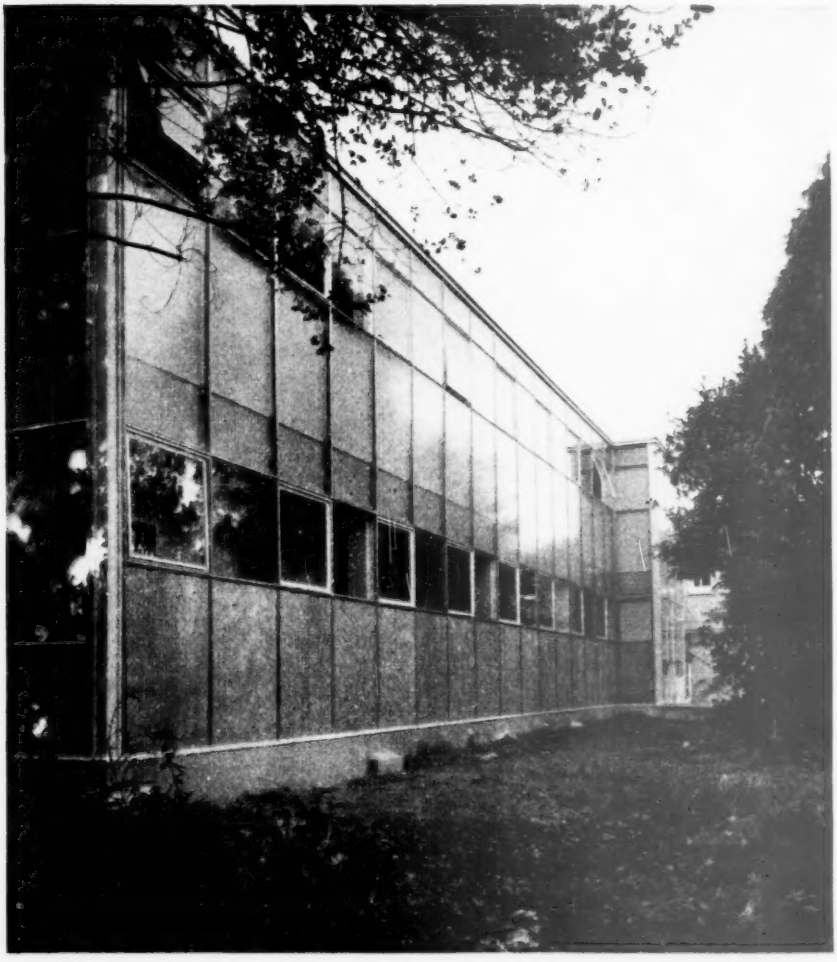
a 1ft 4in deep mild steel plate cleat bolted to perimeter beams. A similar bar but with a mild steel flat welded on to the face is fixed horizontally at window cill and head levels. These glazing bars provide a light steel frame over the face of the building into which are fixed the facing materials, either glass or resin impregnated plywood, windows and doors. In some cases, as on the south west elevation, the 3ft 4in verticals are stopped off at cill and head level to allow for the insertion of windows of differing widths. Where the walls are solid, there is a

2in clinker block lining set back 3in behind the face of the glass and reinforced with mild steel wires strained between the columns at each horizontal course. Both sides of the wall are plastered, the outside being painted with two coats of emulsion paint, and the inside distempered. It is hoped that some form of prefabricated insulating panels will be found suitable for future work, as these, unlike the clinker block, will be able to be fitted after the glazing has been done.

The Frame is planned on a grid of 3ft 4in with a vertical module of 4in. The columns are either 4in × 4in or 4in × 8in made up of solid section of two angles welded together. All beams are 1ft 4in deep with allowances for different spans made by varying the thickness of the top and bottom flange plates which are welded together with a lattice work of mild steel rod. Beams are bolted to a 1ft 4in deep channel section welded to columns.

Ceilings are of 1½in Vermiculite concrete slabs 3ft 4in × 1ft 8in clipped to bottom flange of beams. Floor Slabs:—Ground floor cast *in situ* concrete; first floor precast reinforced concrete units 3ft 4in × 1ft 8in × ⅞in thick, covered with an *in situ* screed. Floor Finish is of Thermoplastic tiles. Internal Partitions are 6in hollow clay pots, plastered. Column Casings are of Fibrous plaster. Roofing:—Wood wool slabs 3ft 4in × 1ft 8in covered with 1in screed and built up bituminous felt with stone chipping finish. Electrical Wiring:—All wiring is carried out in metal braided cable. No conduit is used. Heating:—Hot-water radiators supplied from an existing boiler in an adjacent building.

The North-East elevation. Internal panels behind the glass are coloured yellow-green. On the South-East side panels are coloured bright red. The construction is shown in the isometric drawing opposite.

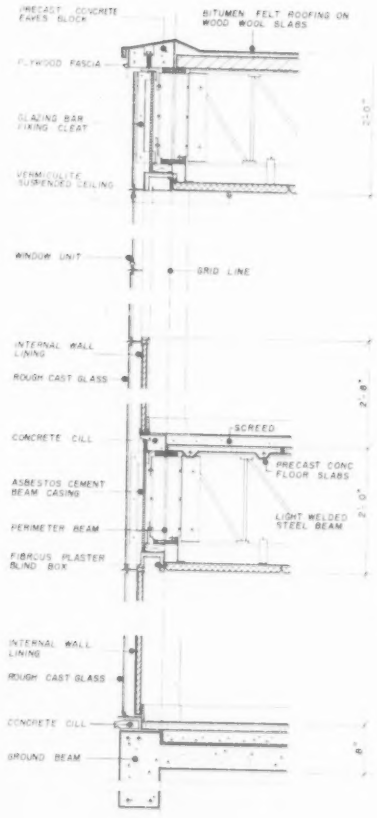


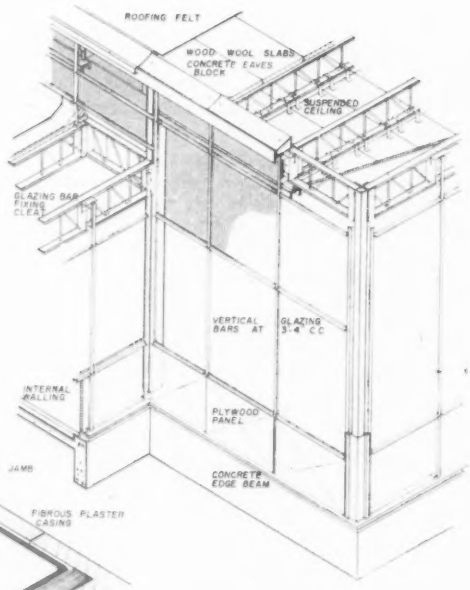
Construction details

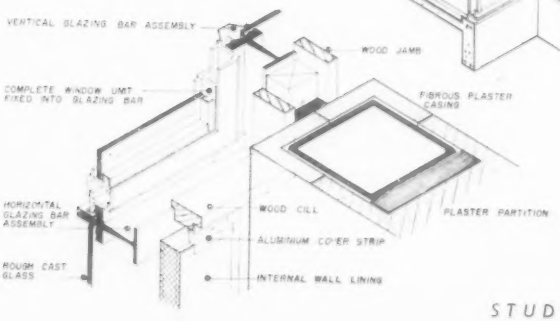
Main Contractor :
Hills (West Bromwich) Ltd.

Subcontractors

Built-in Cupboards :
Built-in Fixtures Ltd.
Electrical and Mechanical Engineers :
Hartley Electromotives Ltd.
External Plywood Panels :
Venesta Ltd.
False Ceilings :
Meta Mica Ltd.
Fibrous Plaster :
Plaster Decoration Co. Ltd.
Flooring Contractors :
Gabriel, Wade & English Ltd.
Framework :
Boulton & Paul Ltd.
Glass :
Wottons (Croydon) Ltd.
Heating :
Benham & Sons Ltd.
Lighting Fittings :
F. J. Furse & Co. Ltd.
Paint :
Docker Brothers.
R. Gay & Co.
Roofing :
Wm. Briggs & Sons Ltd.
Site and Normal Builders' Work :
H. Macnally.







STUDIES AT BRYANSTON SCHOOL

Model of the School from South-East

WOKINGHAM SCHOOL:

Development Project by the Ministry of Educat

An article written by L. W. ELLIOTT, A.R.I.B.A., A.M.I.C.E.
with comments by a spokesman of the Ministry

THE development of the Wokingham School is a project which implements a great many of the Ministry of Education's recommendations on planning. The Ministry, wishing to develop some practical experience in the construction of schools, was anxious to co-operate with a Local Authority. The Berkshire County Council offered to do so, on the clear understanding that the role of the Ministry's Architects would be similar to that of private architects employed by the County Council.

The design of the building and the system of construction were based on a thorough understanding of the educational needs which was done by a close association between architects and educators throughout the whole process of development.

The building technique was developed from a system already in use for single-storey buildings and intended to enable multi-storey construction to be used. In doing this, three principles were considered essential; one, that the system should be flexible, to allow architects to approach the design of each school as an individual problem; another, that it was desirable to reduce site labour to a minimum by the use of standard components which could be rapidly assembled and the third that it was desirable that the resultant building should be permanent and of good quality.

The structure adopted was one which had been used to a considerable extent on schools designed for the Hertfordshire County Council.[1] This structure has been used for a number of schools and, in the school at Stevenage, designed by F. R. S. Yorke, has been developed for two-storey construction. One of the problems was how to combine standards for factory production with flexibility of application and the Ministry decided to use small standard components which could be assembled in a variety of ways, allowing for the different plan and section arrangements. It was, therefore, decided that the grid system

recommended in the Working Party Report, be adopted, with a horizontal module of 3ft 4in and a vertical module of 2ft 0in.

The project complies with the present building regulations and bulletins, although these appear to have been brought out as a result of this experiment and were, therefore, not available to Architects at the time the school was designed.[2] There was, at the time, a limitation on the use of materials which were scarce and, therefore, strictly controlled. This chiefly applied to steel and to timber. However, the amount of steel used in the Wokingham School is considerably above that which need be used for an economic structure, being somewhere in the region of 40 per cent above. The Ministry, however, state that in the interests of achieving efficient building and speed the use of additional steel is justified. On the other hand soft wood has been used in a very limited way, largely at the expense of steel for pressed metal window surrounds and door frames.

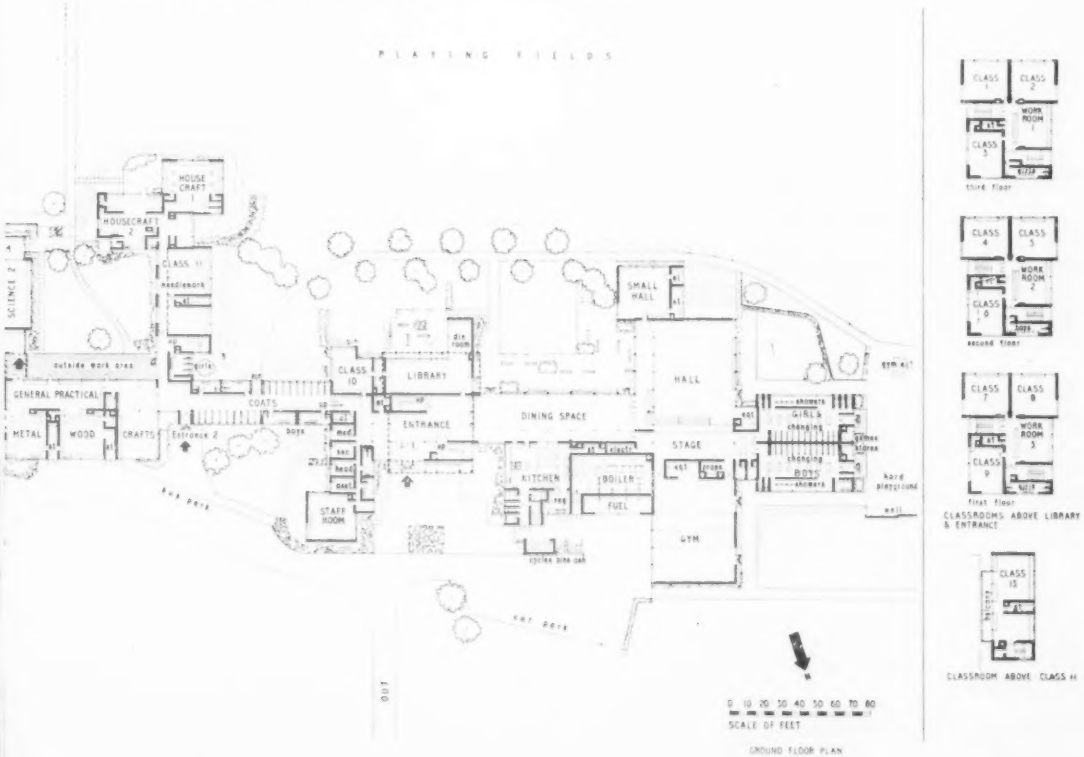
From the published figures, the cost is £215 per child place; well within that normally allowable by the Ministry of Education at £240 per place. However, it is extremely difficult to see how this low cost has been arrived at in view of the expensive type of fabrication used.

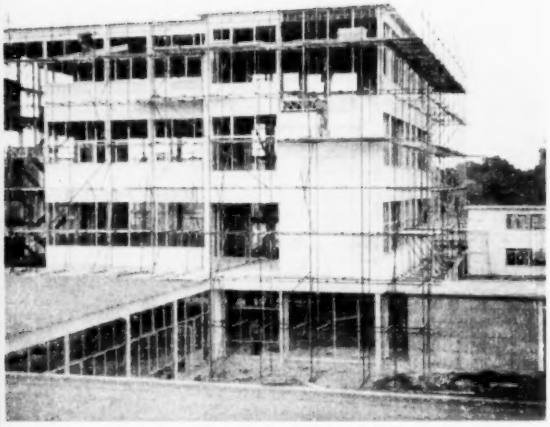
Although the components used are designed for a particular school, it is hoped that these components will be made available to Local Authorities using this particular system of construction. This, therefore, raises the question of whether a factory designed unit for one school can be costed on the basis that it is being used on a number of schools. The manufacturers, therefore, must have based their prices on the assumption that their components will be used on a large scale. It would be interesting to know whether any guarantees have been obtained from the manufacturers that the costs used in this particular school would not be exceeded in future schools, subject, of course, to rises in the costs of labour and materials and if the basic prices will be available to architects who intend using the system. The cost of this

COMMENT

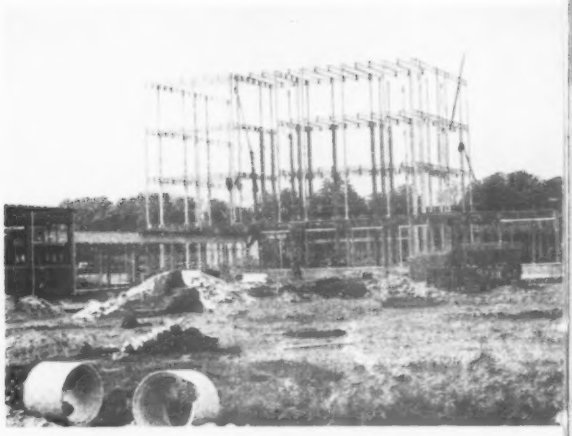
[1] Although dimensionally co-ordinated standardized components for frame and external wall cladding have been used elsewhere than at Wokingham, and notably in Hertfordshire, the actual system developed for Wokingham has not been previously employed. The majority of Hertfordshire schools is based on an 8ft 3in grid. In the few cases where 3ft 4in has been adopted, the stanchions are on a phased grid and the cladding is of plastic material. The approach has been the same, but the components themselves differ considerably.

[2] Building Bulletin No. 2 was published in February, 1950, as soon as the Ministry had a clear idea of the lessons learnt from the initial planning of Wokingham. Paragraphs 11 and 12 of Building Bulletin No. 8 refer to this point.





If the wall panels could be hung inside, scaffolding for multiple buildings of this sort would be largely dispensed with.

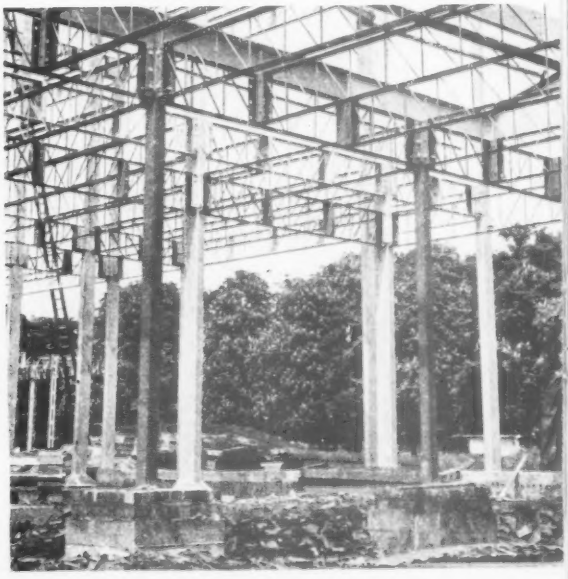


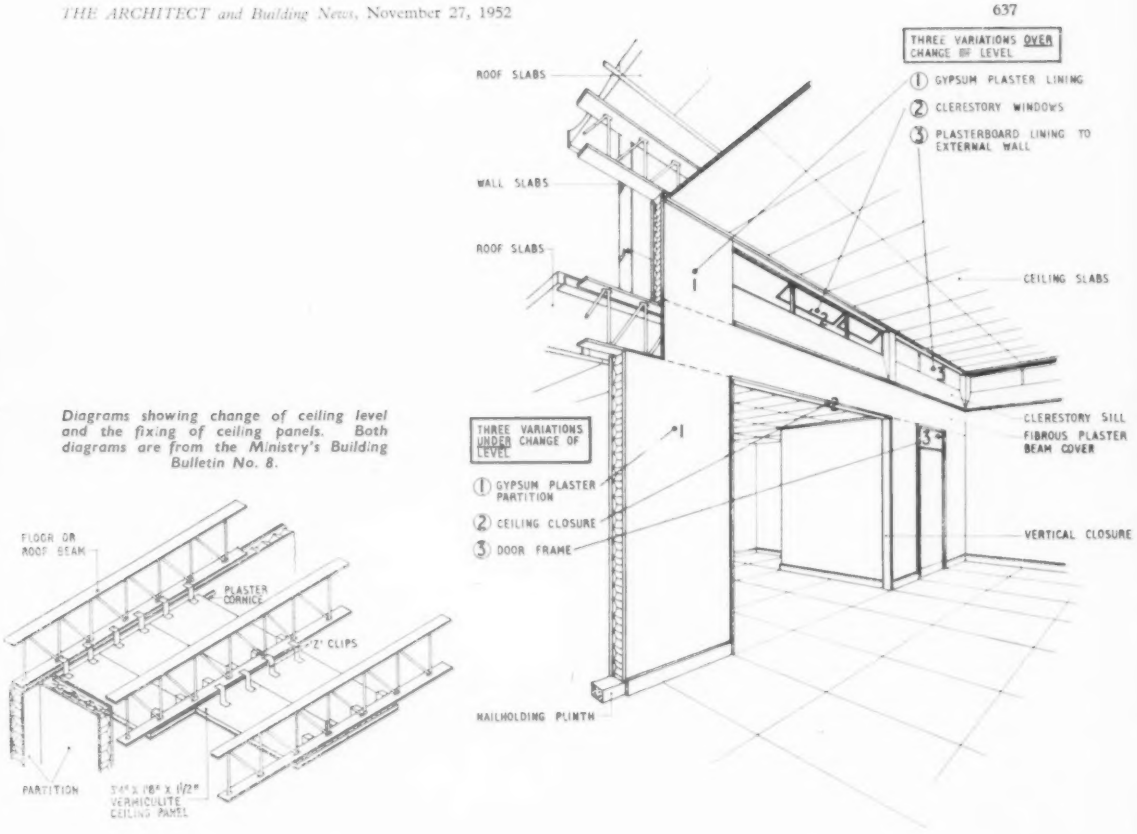
Framework to four-storey block.

WOKINGHAM SCHOOL: DEVELOPMENT PROJECT

Structural framework showing constant depth of beams for a level ceiling.

Steelwork to four-storey block showing independent footings.





Diagrams showing change of ceiling level and the fixing of ceiling panels. Both diagrams are from the Ministry's Building Bulletin No. 8.

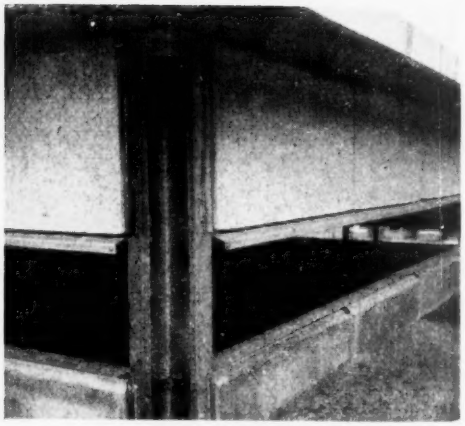
school at rates ruling in March 1952 has raised the price per place from £215 to £250 and some modification will have to be made if this cost is to be reduced to the £240 allowable, which can only be done either by reducing the plan area per child place still further, which will be difficult as the circulation is already low and the areas are nearly minimum, or by modifying the structure. If this latter has to be done, there seems little value in the existing structure for to-day's needs.[3]

It is realized, however, that it is extremely difficult to anticipate production runs to enable an economic price to be maintained. Naturally, the manufacturers have incurred some expense for the development of their particular components and it would be interesting to know over how many schools these costs have been distributed. Until these facts are available, it is not easy to attach any importance to the prices stated in the bulletin issued on this particular scheme.

From the planning point of view, the school embodies a number of space-saving devices and the circulation has been minimized by using certain classrooms and the dining hall for that purpose. At the time the school was designed this was not generally known as being acceptable to the Ministry and, therefore, in relation

COMMENT

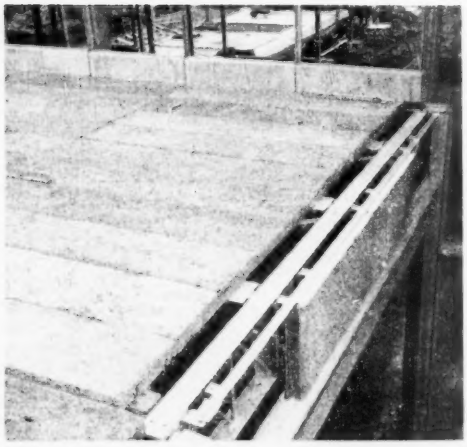
[3] While it is agreed that increases in building costs have probably raised the cost per place of Wokingham from £215 to something short of £250, the footnote to paragraph 31 in Building Bulletin No. 8 pointed out that economies would have to be made at Wokingham just as they would in every other school being built in the face of rising costs. These reductions can be achieved by reducing either the area or the cost per square foot. The area of Wokingham is 76.5 square feet per place. There would be little difficulty in re-designing the school to 70 square feet without surrendering any of the educational principles embodied in the present plan. Several local authorities are already planning secondary schools to about 70 square feet, and one of the Ministry's other development projects is being designed to 69 square feet. A reduction of this kind at Wokingham would be worth about £18 per place. As regards the cost per square foot, some reduction could certainly be made. As a simple example, built-in furniture has been included in the nett cost of £215 to the extent of £8 per place, a far higher figure than usual. It would be legitimate, although definitely not so economical or efficient, to omit this built-in furniture and to provide it "loose" in an equipment account separate from the nett cost of the building.



Corner detail at eaves.

Fixing external concrete slabs.

Woodwool roof slabs.



to other projects designed at the same time, this would appear to be somewhat anticipatory. However, it must be admitted that the planning of the school embodies some interesting and good ideas. It is clear that the development group has had the services of a very far-thinking consultant on educational problems.

Apart from the combined use of circulation space, however, the garden room, which is purely a long narrow greenhouse, has been classed as a school room, which many authorities would probably not consider suitable, but if it were, it opens up many possibilities in design and construction.

The structure has been designed principally as a steel frame using standardized stanchions and beams designed to meet the conditions of planning within the limits of the horizontal and vertical modules.

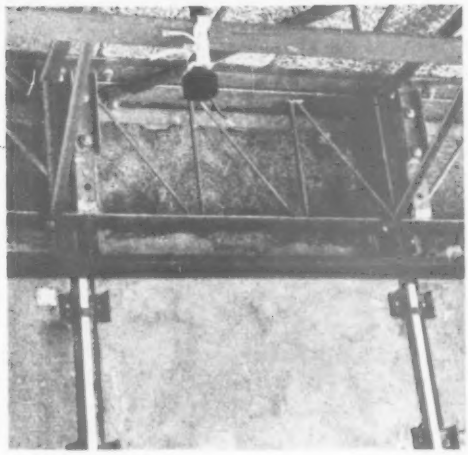
All beams have been designed to be 1ft 4in to enable a false ceiling to be added at a constant depth throughout the building. This, of course, has the advantage that it enables the services to be concealed and the partitions to be of standard height. The external walls are constructed as a single factory-made unit, which embodies weather protection and insulation. These panels are fixed to subsidiary steel framework which is largely responsible for the increase in the steel content of the building being above normal permissible standards. The units themselves are of sandwich construction, the outer layer being of dense concrete and the inner of sawdust cement. The filling is of woodwool for thermal insulation.

The erection procedure is complicated in that it is necessary to position vertical weather strips over the subsidiary steel framework and to apply asbestos cord as a protection against weather penetration. This is supplemented by horizontal weather strips in mastic. The slabs are laid on a mortar bed and are finally tightened by screws. It is not clear which trade is responsible for this erection as it would appear that bricklayers would be needed for laying the mortar joint and steel fixers for screwing the slabs in position.

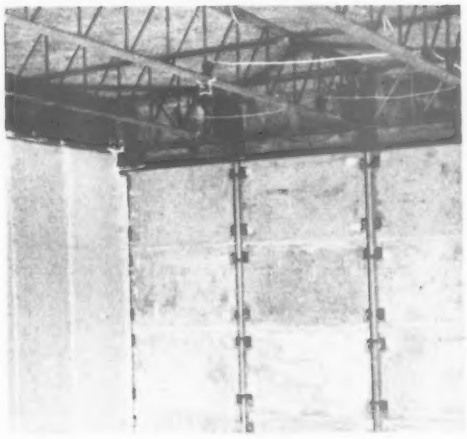
The windows are fixed in sub-frames, consisting of 16 gauge pressed steel members delivered to the site and assembled into a complete frame on the ground. In certain instances, these sub-frames incorporate droppers which are used for electrical services. The roof construction is generally of woodwool slabs laid with a sand and cement screed to falls with two layers of roofing felt. Most roofing specialists require three layers of felt unless one has a highly finished surface as a base.

External gutters are avoided by the use of pre-cast concrete eaves sections which incorporate down pipes. Where a wearing surface is desired, the roof is finished with a series of processed asbestos cement tiles.

The four-storey block has floor slabs constructed of pre-cast concrete 1½in thick. These slabs are laid on strips of insulating board on to the beam flanges to form a resilient bearing, and are designed to give an adequate sound reduction. The wall panels are attached in the same way as for the single-storey work, but it appears



The strips of wood are for the attachment of plasterboard lining.



Interior showing external wall panels and internal partitions of Bellrock. The service runs can be seen in the ceiling space.

Erection and finishing of Bellrock panels.

that it has been necessary to employ steel scaffolding, an uneconomic measure as it is thought that all attached cladding should be done from inside the building without the use of scaffolding.

The partitions are designed to meet all planning requirements. In view of the 3ft 4in module adopted it is interesting to see that there are, nevertheless, four types of units required to overcome constructional problems. The partitions are mainly of pre-cast gypsum requiring a minimum of skilled labour and can be decorated without waiting for the building to dry out.

Services are normal, except for the heating installation which, again, is similar to that used in the Hertfordshire schools and utilizes thermostatically controlled space heaters, with electric fans to distribute warmed air. These heater units occupy an area of about 230 square feet which is considerably more than necessary for radiators or even more for floor or ceiling heating as no allowance is normally made for the space occupied.

Natural lighting problems embody the use of reflected light as well as direct light and it has, therefore, been assumed that if the sky factor is 2 per cent, a daylight factor of 2 per cent will also be attained. Reflection from wall surfaces can increase this factor.

In view of the modest lighting requirements the use of clerestory windows has not been adopted and top lights only have been provided to give preferential treatment to chalk boards and demonstration areas. Glare has not been considered to any great extent, apart from the fact that glazing bars have been painted in colours of high reflection value and venetian blinds, an expensive item, have been provided in most teaching rooms. [4]

In conclusion the planning of the individual teaching groups is excellent. Leaving aside the new techniques which have been adopted in the construction, the greatest factor is that the architects have endeavoured to segregate the trades so that continuous work can be provided. This is a most important feature and can apply to all systems of construction, including traditional work.

COMMENT

[4] On the contrary, the most careful consideration, assisted by the Building Research Station, has been given to glare. Paragraph 234 of Building Bulletin No. 8 describes the problem and the steps taken to overcome it. In addition to the remedial actions mentioned above, the following have also been taken:—

(i) Windows have been designed right up to the ceiling in order to avoid the dark band above the window heads, which is often a cause of glare and excessive contrasts.

(ii) By arranging windows bi-laterally on adjacent walls rather than on opposite walls (using a clerestory) the light is distributed more evenly and in such a way as to minimize contrasts.

(iii) The deep reveals to roof lights were deliberately designed in order to cut off direct view of the sky.

(iv) All windows have been internally putty-glazed to present the minimum width on the inside face.

(v) The colour scheme has been planned to grade down contrasts and so minimize the effects of glare.

Diving Board at Bryanston School

designed by: ARCHITECTS CO-OPERATIVE PARTNERSHIP

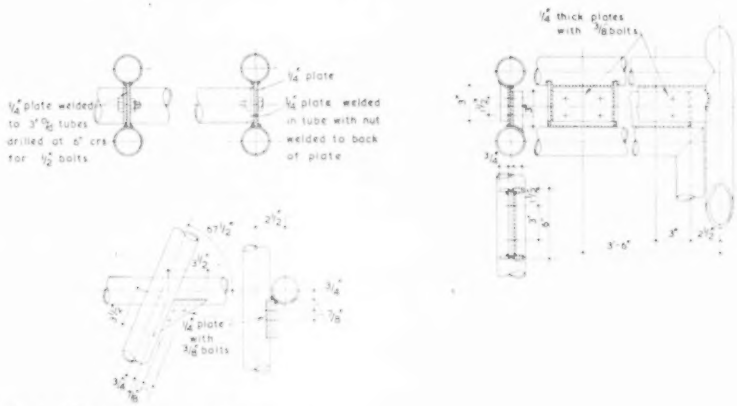
consulting engineer: OVE ARUP & PARTNERS

THE requirement was for a 3-metre spring board and a 5-metre running board capable, on some occasions, of taking about 30 boys : to be built at the school bathing place on the bank of the River Stour.

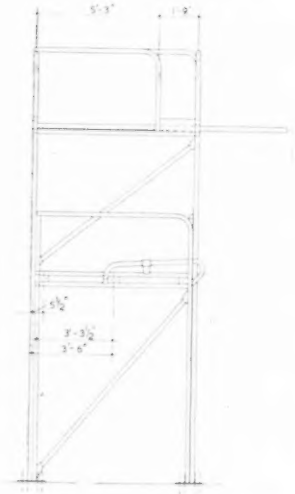
Liability to flooding and the poor bearing capacity of the riverside bank led to design of a rigid structure with a minimum dead weight. To ensure uniform settlement—if any—the foundation was designed as a monolithic reinforced concrete raft. To reduce its thickness and weight the supports to the superstructure were designed to cover a minimum area of ground.

The superstructure is made up of 3in 11 gauge welded steel tubes. For ease of transport and erection by unskilled labour the structure was completely prefabricated in two separate parts which were bolted together on site.

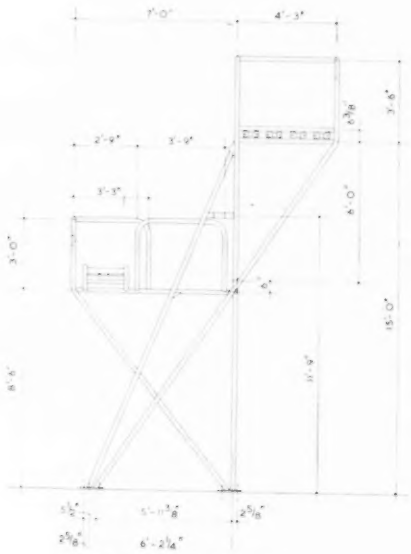
The structure is fully triangulated to provide rigidity and strength with economy of material. The total amount of steel used was just over 8 cwt. Boulton and Paul Ltd. were contractors for the framework.


¼" plate welded to 3" O.D. tubes drilled at 6" crs for ½" bolts
¼" plate
¼" plate welded in tube with nut welded to back of plate
¼" thick plates with ⅜ bolts
¼" plate with ⅜ bolts

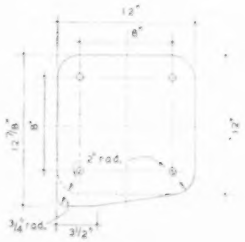
details of connections.



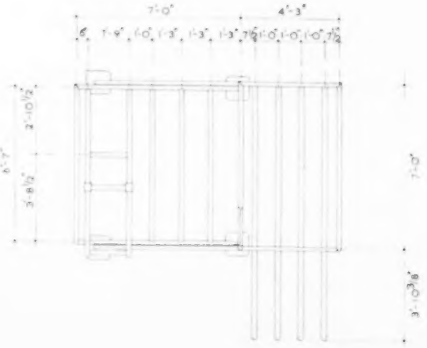
side elevation.



front elevation.



base plate detail.



plan.

SYMPOSIUM ON SECONDARY MODERN SCHOOLS

Summaries of Papers read on November 12 at the ARCHITECTURAL ASSOCIATION

THE morning session opened with a short address by the Chairman, Mr. A. R. F. Anderson, the President of the A.A., who introduced Mr. Clegg, M.A., the Director of Education, County Council of the West Riding of Yorkshire, to deal with "The Education Act, 1944, and the Post-war Building Programme." He said:

THE EDUCATION ACT, 1944 AND THE POST-WAR BUILDING PROGRAMME

"The features of the 1944 Act which most affect school building are—the requirement that Development Plans shall be by regulations, and the grand purpose of the Act to establish secondary education for all. The attainment of this purpose depends very largely on the nature, status and permanence of the Modern School," and went on to expound his views on what is a "Modern School and how is it likely to develop?" by describing a modern school and its functions; by comparing the methods of education existing sixty years ago with those of to-day, and in particular the advent of the film and television into the classroom. Comparing the types of children, he thought that if we took literally the current idea that of every 100 children some 15-20 per cent are Grammar School types, 10-15 per cent Technical School types, and the rest fitted for the Modern School, and then built a multilateral school on this basis, with each side self-contained, we should then produce a building which would dictate a type of school organization based on an entirely unproven theory.

Mr. Clegg then turned to the dangers of quoting from earlier regulations, which probably account for the planning of a greater number of existing schools than do those regulations issued since the war. He listed these regulations and described the type of room which then had to be provided, pointing out that they were admirably framed to build the type of school which alone could meet the educational circumstances of that time when one master with four stipendiary monitors, taught 200 children the three Rs.

On the prospects of the development plans he thought the requirement on local authorities to prepare a plan showing what new schools were needed and what should be done in the old excellent; but "the grand hope of 1946-47 that plans might fully be realized within the easily foreseeable time has gone" . . . "1949 and 1950 saw us building madly to tackle accommodation for the birth-rate bulge in the infants' schools." He suggested that the continual contraction of available monies had meant that the hoped-for expansion of the schools programme was impossible, although a steady number of places annually was maintained until the blow fell on the 1951-52 programme. It might not be before the middle of the next decade that we are likely to be able thoughtfully and deliberately to work through a development plan as the need demands.

Mr. Clegg then outlined the good things that had come out of post-war school building, "lest he should give the impression that all that has happened since the war is lamentable," pointing out finally that the limitations of cost and material shortages have not been without their good development in many matters about which architects were more competent to talk than he.

On post-war difficulties he mentioned that "to the architects the education officer is someone who does not know what he wants or why he wants it; he is incapable of producing a dependable schedule of accommodation. . . . From the point of view of the education officer, on the other hand, the County architects are lamentably conservative. . . . The Ministry, on its side, appears to think that the folk in the localities have all that they need if programmes are approved some 20 months before the end of the building year." He pointed out the difficulties of deciding whether to give a suffering county area which adjoins a borough housing estate bristling with new schools, six distributed classrooms, or a new school, with all its specialist rooms, and how a whole plan can be severely shaken by such an emergency as a church school suddenly being burnt down, and alarm spread by the news that a new school in the coal area has dropped 3ft while in the course of erection.

Mr. Clegg wound up his address with a series of questions as to whether the building regulations ought to be amended so as to build new schools far less generously; whether the insistence in the past on building to a complete form entry and reckoning on classes of 30 and a leaving age of 16, should continue; whether small schools should provide a full range of desirable subjects; whether sufficient attention to further education has been given; whether sufficient notice of programmes is given to enable them to be planned wisely; and whether the educational integrity is being sacrificed to political expediency. He concluded with the hope that these and many other problems might be resolved in the course of the conference.

EDUCATIONAL POLICIES AND THE LIFE OF A MODERN SCHOOL

Mr. H. K. Olphin, the headmaster of Blackwell County Secondary, in his talk on "Educational Policies and the Life of a Modern School," said: "When a new headmaster enters a grammar school he can, like his architect, build upon the experience which has been gained during the golden age of the grammar schools. But if the architect wishes to build the modern school he must appreciate, as does the headmaster, that no one can yet give a factual description of the life of a modern school which can be accepted with certainty as the type of the present or the guide to the future."

He described the life and policy of a modern school, and the several parts of the building itself, starting with the school hall which was pre-eminently both the symbol and the physical instrument of the corporate life of the school; and continuing with descriptions of the other centres from which the life of the school can be viewed; the classrooms and the playground; the many rooms used or designed for

special purposes—woodwork, metalwork, housecraft, needlecraft, science, art, music, history, etc.

Mr. Olphin concluded by mentioning that in particular the dining halls should have been added to the centres of school life and here much depends upon what the architect is able to do; for where there is a dining hall equal to that of a good restaurant, then it at once becomes a room around which school policy centres. He added that perhaps his review could have had as its central theme the dependence of modern school boys and girls upon the building which the architect creates for them. Like any other workmen, the schoolmaster cannot give of his best without the best tools and for those who teach in the modern school, the building itself is pre-eminently both the first tool and the arbiter of policy

THE PHYSICAL AND MENTAL REQUIREMENTS OF CHILDREN

Perhaps the most interesting and informative paper of the morning session was that of H. M. Cohen, M.D., the School Officer for the City of Birmingham. He started by telling the conference of the three sets of factors which govern the mental and physical well-being of a child.

On nutrition he reminded those present that the healthy child makes the best use of education provided for him, adding that there has been a distinct improvement in the nutrition of our children. On school kitchen and dining room he stressed how adequate hygiene was of paramount importance in preventing communicable diseases and how essential the need for personal cleanliness amongst not only the kitchen staff, for whom adequate lavatory and washing facilities should always be provided, but also among the children themselves.

He mentioned on Vision and Lighting that for satisfactory education there must not only be light to see the tasks set, but an amount and type of light that would send through the eyes such clear impressions that the brain could correctly interpret their meaning. "Natural light is the most desirous and the school building should always be planned so that the best possible natural light will result." He gave a most interesting contribution on the reflective qualities of internal walls and ceilings, the colours to be used on them; the effect of glossy surfaces, not only on the efficiency, comfort and ease of seeing, but also on the general health of the child; desks and furniture should be light in colour; boards have a matt surface to avoid reflected glare and be a light grey green. "Good light saves mental fatigue by making mental processes easier. On the other hand, restlessness, inattention and fidgeting occur in classes with poor light."

He stressed the need for building on an open site with playing fields attached as it was generally admitted that games have an educational as well as a recreational purpose.

On heating and ventilation experience has shown that good cross ventilation is one of the best methods of controlling airborne infection and Dr. Cohen felt that a large amount of the window space in the classroom should be made to open.

"Engineering and building construction are concerned in these problems of satisfactory heating and ventilation, but several interesting and relevant factors can be stated. The type of heating which is installed should be such that distributes the heat evenly. Professor Leonard Hill has shown that the ill-effects arising from deficient ventilation are not due to the altered proportions of oxygen and carbon dioxide in the air, nor to the organic poison formerly assumed to be present in the expired air, but to its raised temperature and increased moisture and, most important of all, to its lack of movement."

On hearing Dr. Cohen suggested "It is usual to test the hearing of children by means of a gramophone audiometer. In planning the school it would be very helpful if some attention could be given to siting a room which would be quiet enough for this purpose."

He then turned to the delicate subject of the hygiene problem of the older girl, making a special plea as this problem has been sharpened for schools by the raising of the school age group. The Medical Women's Federation have recently drawn attention to the need for special facilities for girls requiring privacy and a disturbing feature which emerged from his enquiry is the number of schools that do not have lavatories that lock. Dr. Cohen made a plea for a special unit to be provided, preferably a "personal service room" which could contain an incinerator, a w.c. and wash-hand basin.

He pointed out the dangers relating to overcrowding which cannot be overlooked and how essential it is to give the maximum amount of space to the parts of the building where pupils assemble in large groups. He emphasized the need for adequate and individual desks, not only to avoid disseminating infection but also from the physical point of view and urged the use of a hygienic drinking device, one with a guard over the pipe.

The importance of every cloakroom being adequately ventilated and heated, he said, to allow for the drying of damp clothes should never be overlooked and there should always be ample space for hanging garments separately.

Dr. Cohen also spoke on mental needs; of the great importance of mental hygiene in school life and of educationally sub-normal and emotionally maladjusted children in particular; the need for some measure of guidance and discipline, and he concluded his most interesting address by stating how it has been shown that mental ill-health in adult life is frequently due to emotional maladjustment in early childhood, and added that teachers are among those who are obviously in a unique position to recognize the existence of psychological problems in the school mind.

GENERAL PLANNING AND GROUPING OF ROOMS

On "General Planning and Grouping of Rooms," Mr. B. S. Braithwaite, the Chief Education Officer for East Sussex, opening his address on the important subject of "Atmosphere," advanced the view that "A school is only as good as the teachers who teach in it, but good building attracts good teachers, and good buildings help teachers of whatever quality in their work." He pointed out that the majority of new schools will be completely new on sites which have never been used for building before. With regard to the use of the site, the architect and the education officer sometimes differ fundamentally. Mr. Braithwaite adheres to the view that a school building on a sloping site is more likely to have an interesting and intimate atmosphere than one all on one level.

On site and layout his main point was that he hoped that, in the future, more thought will be given to planning our secondary schools, particularly those which have more than three forms of entry, in three blocks:—

(i) Hall, gymnasia, dining accommodation and administration;

(ii) Classrooms, including library;

(iii) Practical rooms with a few classrooms.

On the grouping of rooms: "The hall is the centre of the life of the school and should be planned accordingly."

Mr. Braithwaite is completely averse to the use of classrooms for dining purposes. No matter how ingenious are the devices thought of in this context, he is convinced that classrooms should, under no circumstances, be used for school meals.

On physical welfare he mentioned that it is now generally recognized that the gymnasium is a specialist room which does not easily lend itself to be used for more purposes than physical education. He suggested, with regard to cloakrooms, that in secondary schools it is undesirable to have coats hanging in the corridor without a proper barrier between the cloakroom space and the corridor. On stores it was his opinion that open stores have very few virtues and should be closed.

In conclusion, he said that the educational architect is to-day encouraged to use more freedom in the planning of his site, his buildings and his rooms, than before, and he suggested that, provided all concerned are conscious throughout of the need to preserve an atmosphere as intimate and as little institutional as possible, there were few difficulties in planning better schools which common sense and frequent consultation between architect and education officer cannot solve.

ECONOMICAL USE OF SPACE I

Peter Shepheard, who was chairman for the afternoon session, introduced Denis Clarke Hall, who spoke on "The Economical Use of Space." He plunged straight into the question of costs, pointing out that in 1948-49 £350-£360 per child place was the ruling price which could not continue if the school building programme was to go on, but unfortunately, while limits were being put on expenditure, building costs were steadily rising. He stated that equipment and several aspects of plan were outside the architects' province, and put in a special plea for a thorough study of equipment (for he felt that much was included which was not used sufficiently to justify the cost), and also for the actual areas given for practical rooms and stores, for he felt, in looking for ways to bring down costs, it might be possible to reduce certain areas without affecting their user.

In planning stores he felt that here very considerable space economy could be made, and put forward a suggestion for saving about £2 per child place by this means.

He drew attention to the fact that structure, services and drainage depend on an efficient plan, and pointed out the advantages of block building as a factor of economy, and that in considering the economical uses of enclosing surface areas the greater the departure from the single cube, the greater the expense. Adequate natural lighting is also an essential, and so, with the square, or nearly square, plan, it will be necessary to introduce central light. He cited a school he had designed for 540 pupils on two floors, to a rectangular form of 260ft by 150 ft, with a central light area of 55ft by 70ft, where the cost of glazing the roof over was £1,432, including the tubular space frames, whereas, had this area been left open, the cost of the enclosing walls would have been £3,750.

Mr. Clarke Hall went on to describe the advantages, both practical and economical, of a mechanical extract ventilation system. He stressed, in addition, that cube planning required a different approach from normal, and explained the points to be borne in mind, particularly that every square foot added to the base would increase the enclosing surface areas, and must only be considered if the extra volume can be used on the upper floors, and all set backs and changes in roof level must be avoided as far as possible. To conform to sunlight standards, the block will have to be on a north-east axis, and it will be cheaper to enclose light areas than to leave them open.

Mr. Clarke Hall illustrated the economies that might be gained by cube planning with four theoretical sketch plans, based on the suggestions of the Building Regulations with a maximum of 75 sq ft per child place.

One was a normal semi-open plan with 60 per cent of the accommodation on the first floor, the plan consisting of two teaching blocks containing cloaks and lavatories, with additional blocks adjoining for assembly hall, gymnasium and changing, workshops, kitchen and dining; the second a cube plan on two floors to an elongated rectangle of 375ft by 80ft; the third a cube plan on two floors to a more square rectangle of 255ft by 120ft, and the fourth a cube plan on three floors to a rectangle of 270ft by 70ft. It would appear that by the effective use of cube planning savings could be made in the reduction in actual floor area by reducing circulation; economy in the wall surfaces enclosing a given space; economy in roof area for a given space; economy in cube, and in addition further economies in structure, services and drainage.

ECONOMICAL USE OF SPACE II

The second paper on "The Economical Use of Space" was read by Mr. J. R. Sheridan-Sheldon of the Education Department, Birmingham. He started by saying that we know that, in order to build to the present cost, economies of plan are necessary and went on to explain the attempts made in Birmingham to solve this problem, putting in a strong plea that designers of school buildings should bear well in mind possible future changes in teaching requirements.

He felt that block form of planning had several advantages, but a fairly large ground coverage area.

In Birmingham, as in large cities, the sites available tend to be small and school buildings must be compact in order that playing space should be as great as possible and they had adopted the vertical system of building by which economy of circulation could be obtained by planning a unit complete with teaching spaces, cloaks and lavatories the units being placed directly over each other to attain economies of services and drainage. These vertical units can be joined by links in which are contained laboratories, housecraft rooms or the library.

Mr. Sheridan-Sheldon continued:

"Despite the many disadvantages, dual use will have to be made of the larger areas of teaching space on the ground floor. Separate provision of dining rooms can no longer be afforded and must be provided by other means. The large assembly hall and small hall can be planned in a variety of ways as one unit and by the adoption of various levels and the inclusion of steps not only can a source of interest be achieved in this area but, if the small hall is placed adjacent to the kitchen, it can be used as dining accommodation. Additional dining will have to be allowed for and this can be provided in the circulation or work spaces."

He suggested ways in which the stage could be used—as a music room—as part of the circulation space—and as additional dining space. Another economy would be for the changing room to the gymnasium to be planned to give access to the stage, thus enabling it to be used as a dressing room.

He finished with other suggestions for economies, among them hangers for coats in recesses in corridor walls, movable cloaks fittings which can be pushed back when not in use and which might save the large areas used for centralized cloakrooms.

PLANNING TO STANDARDIZED COMPONENTS

Mr. Richard Sheppard began his address on "Planning to Standardized Components" by listing the structural components of secondary modern schools, but said that what was apparently meant here was standardized columns and beams, frames, panels, desks and so on, made off the site and assembled on it.

He went on to point out that on all large jobs a high degree of structural standardization is essential. He examined various forms of units used in schools to-day, adding that it was only possible to proceed from a thorough detailed study of the system it is proposed to use.

He thought that Education Authorities and the Ministry have a profound contribution to make as they alone are capable of developing a single programme which integrates educational techniques and building methods. He felt it was probable that a useful advance can be made on the lines of grouping the various specialist requirements, science, domestic subjects, physical activities and general teaching into different blocks. The grouping of large span units, of areas requiring specialized services or other special problems, assists the task of using standardized components economically, but it was a mistake to try to combine the use of standardized units with *in situ* methods of construction. Traditional forms of construction do not mix with manufactured components.

He concluded by emphasizing the absolute necessity of using only the standard components. It is common to find architects asking for some specialized unit which may only be required a few times. On the other hand the manufacturer is likely to stagnate unless he is prodded to reduce the number of units he must carry in order to reduce overhead costs.

ECONOMICAL USE OF STRUCTURES AND MATERIALS

On the "Economic Use of Structures and Materials" Mr. L. W. Elliott gave a most useful and interesting address by stating that the general problem of design of the structure for schools is one which is intimately bound up with the building as a whole, rather than with the detailed structural design as this usually has to be modified to perform other functions.

In view of the large window areas, school buildings can be considered as a series of horizontal membranes. Rigidity necessary for wind bracing can be provided by partitions and walls. Since the war, it has been usual to design on the basis of bays and there has been widespread use of portal frame systems of construction, with rigid joints. This is an important development resulting in a reasonably low steel content and has also meant that columns can be supported on the slab and not taken into the ground as the necessary resistance against wind forces has normally been taken at the junction of the beams and columns.

It is necessary, in the interests of standardization, to endeavour to create structural floors and roofs which have completely level soffits. This can easily be achieved and in fact has been, in the Ministry of Education's school at Wokingham, by the use of suspended ceilings. The space between the suspended ceiling and the floor has been utilized to accommodate the services required.

There are many ways of designing a floor of this type. It could be done with reinforced or prestressed concrete, cold-rolled steel sections or built-up sections of rod and light angles. If this floor could be utilized for all the services then the foundation slabs could also be of clear areas of concrete unobstructed by ducts.

The external walls (especially where windows occur) and the internal partitions can then all be completely composed of standardized units. Any external walls required to be built of local materials can be entirely free-standing.

The first idea which comes to mind is to use a diagonal type of structure, as was used for the Fairway Restaurant at the Festival of Britain where standard steel pans were used and concrete cast to form a series of diagonal ribs and tubular steel columns supported the roof at any intersection of the ribs.

But what is really required is two skins, one forming the ceiling and one forming the floor finish with an inner core which can be readily pierced to accommodate the services. Because of change in conditions of stress at points of support, these two external surfaces should be of material able to take compressive or tensile stresses.

The structural elements of this membrane can be achieved with concrete or steel which can be in the form of pre-made space frames, rods or cold-rolled steel sections. If the right type of structural system is adopted there are ways of varying the structural strength dependent upon whether the membrane is to be utilized as a floor or a roof. Once this structural membrane has been erected it is then a very simple matter to build partition infilling panels without the need of any complicated work, because of the standard height without any obstructions due to beams. The question of thermal movement and the provision of expansion joints becomes a less serious problem.

The time taken to construct school buildings is dependent upon the foundations and ground-floor slabs and it is essential for speedy construction that foundation work be kept to a minimum. It is important that services in ground-floor slabs should be minimized. Wherever possible column loads should be carried directly on the slab and independent footings used only for assembly halls, gymnasia, etc.

Important economies in construction can only be achieved in planning and in simple sections. To achieve simplicity in this direction it may be expedient to utilize systems of mechanical ventilation and to employ natural roof lighting. The problem of the maximum enclosure for the minimum amount of external walling is one of the principal ways by which economy in materials can be achieved. It need not, however, lead to monotony in the architectural treatment, especially with the use of top lighting. A number of schools built recently which have the internal planning enclosed within a rectangular uniform shape do show the possibilities.

Collaboration with the engineer at the planning stage is essential unless he is asked to provide an all-enclosing structure, say 200ft long and 200ft wide, glazed with translucent thermal insulating panels with no internal supports. The architect can then assemble internal elements of dry construction rather like building a school beneath a modern version of the St. Pancras Station roof. This suggestion may appear fantastic, but with light geodetic space frames clad with rigid slabs of glass wool it is a matter for speculation and research into the possibilities for the future.

THE CARE AND MAINTENANCE OF SCHOOLS

The last speaker was Mr. H. Conolly, F.R.I.B.A., the County Architect for Essex, on "The Care and Maintenance of Schools."

"You may think it impertinent of me to suggest to members of the A.A. that easy and economical maintenance of school buildings starts on the Architect's drawing board.

Nevertheless, it is true and I know that most maintenance surveyors will agree with me."

He spoke on the size of the problem and how big a job maintenance of schools becomes. The Essex County Council spend something like £650,000 a year on maintenance and as much as £240,000 a year on secondary schools alone.

Mr. Conolly explained that the moneys needed for annual maintenance of schools are raised from the rates or county precept and went on with a most interesting description of his staff and the way in which he organized them, choosing former craftsmen as his Divisional Building Surveyors.

Standing Orders call for all work which is estimated to cost more than £2,000 being advertised publicly.

Engineering work such as heating, hot water and the electrical services is handled by a special staff of technical inspectors, working under a Chief Engineer.

Mr. Conolly listed the main sources of dilapidation which he felt could be avoided and one interesting point that he brought out was that it is the evening use of schools which is most unkind to the fabric.

He described the normal maintenance required and the daily life of a building maintenance surveyor often very trying, and pointed out that what does make him see red is when he has to incur expense and go to a lot of trouble to put right things which never should have occurred in the first place—if only someone, one day, had thought out the solution of the problem a bit better, or some architect or clerk of works had watched the job a bit closer during erection, and concluded by saying that he didn't expect that it is likely to apply to members attending this Symposium.

DISCUSSION

The discussion on the papers seemed to divide into the Educationists who favour a type of free planning to which we have been used in the past and those persons who felt that if the cost per child place was not to be increased then some centralized planning was essential unless finishes and equipment were to be sacrificed. Mr. Clarke Hall made an extremely convincing case for compact planning, showing slides of work he had designed to illustrate the possible economies to be obtained. If this system of planning is not adopted in the near future, then it was obvious that the cost per place would have to be increased and, therefore, it became an unresolved problem. However, compact planning was necessary in built-up areas in large towns so that this development will proceed and the educationists can then see whether the right atmosphere is created for teaching.

Mr. L. W. Elliott also showed a number of slides which developed the compact planning principle as far as structure is concerned and showed how it was possible to save as much as 24 per cent of steel and other scarce materials. He then went on to elaborate on his ideas for using a membrane floor and roof which could accommodate all lighting and services and give complete flexibility in the planning of partitions, external walls and columns.

Mr. Conolly and Mr. Stillman gave excellent papers on the Care and Maintenance of Schools and pointed out the need for considering the question of maintenance when considering the cost per place. Obviously a sound case can be made for using more durable materials at the expense of the initial cost. They said that a number of proprietary systems of floor covering, for example, had been used on the grounds of costs. Sometimes these systems could have maintenance reduced by the use of mechanical equipment for the application of waxes and for washing. If this equipment is not provided then more traditional materials certainly show their advantages to the full.

The audience consisted largely of Architects and Educationists, together with a number of students, and the many people who spoke pointed to the fact that this was a worthwhile symposium.

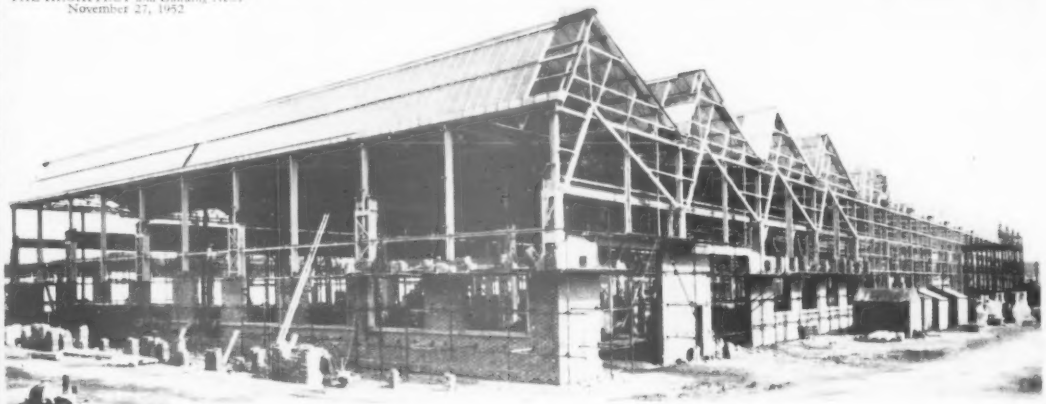
IN PARLIAMENT — contd.

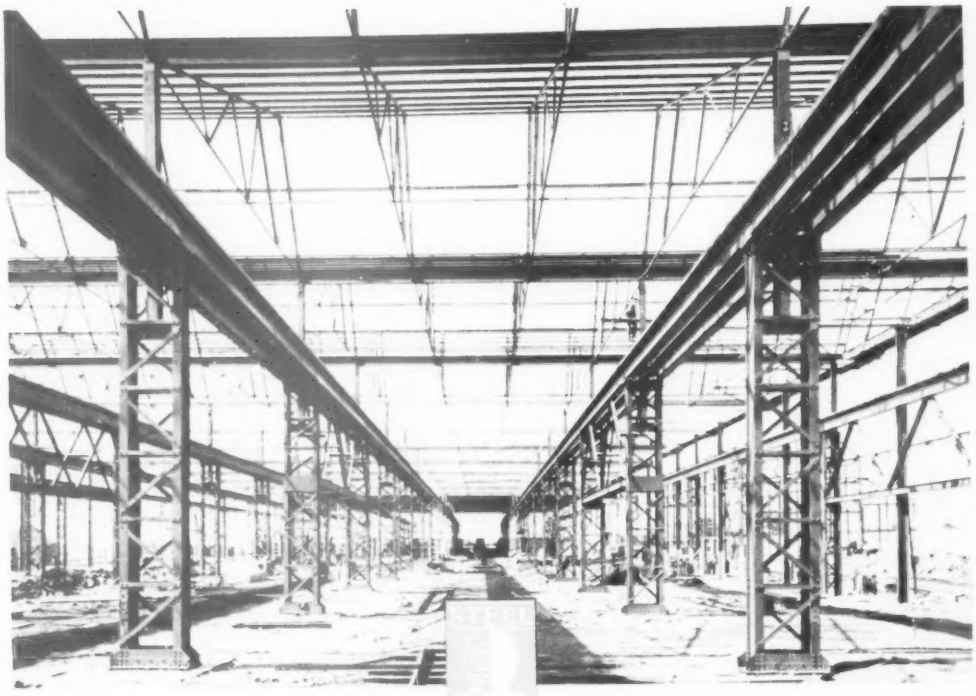
Mr. Molson, Parliamentary Secretary to the Ministry of Works, in his reply said that both these M.P.s seemed to think there was some secret agreement between builders for extracting exhorbitant charges from the public, and that that was having a substantial effect on the cost of repairs. In most cases the businesslike and prudent person asked for an estimate, and the schedule referred to had no bearing whatever on any case when a quotation was given. It only came into operation in the rare cases in which for some reason it was impossible to obtain an estimate from the builders. These were maximum charges, and in many cases it was possible to arrange with the builders that the charges should be less than those in the schedule.

The chartered surveyors' institute had been referred to as an irresponsible body; but it was a perfectly respectable institution of professional men, responsible for the interests of their customers who required work to be done, and this was not the slightest reason to suppose that when they agreed to the schedule they had not carefully ascertained what the builders' costs were likely to be. The building trade employers' federation by no means included all builders, and there was no obligation on members to charge these prices. Certainly those outside the federation often made lower charges.

When in 1934 the Ministry of Works was asked to accept the schedule it declined to do so, on the grounds that it had not been given the opportunity of investigating the charges. The Ministry had never been willing to accept it as binding. He had no doubt that any Government department asked to accept the 1950 schedule would give the same answer. But he was bound to say that they had no reason to suppose that the charges made were exhorbitant. The provisions of this schedule were very similar to the Ministry of Health's form of prime goods contract as agreed with the Ministry of Works, the War Damage Commission, and the National Federation of Building Trades' Employers, to be used by local authorities for the repair of war-damaged buildings Therefore there was no reason to suppose that there was anything unreasonable in this schedule. The impression had been given that there was something secret and surreptitious about it, but in fact it was published in Spond's "Architects' and Builders' Price Book," and was shown as being an agreement in which architects or surveyors could check the bills sent in, and what was provided for in that schedule was the maximum.

When it was suggested that the high cost of building repairs at the present time was due to this schedule, they knew that the high cost of repairs was due to the greatly increased earnings in the building industry and the very greatly increased building materials prices. If the level of 1938-39 was taken as 100, the earnings of those employed in the building and contracting industry had gone up to 265, and building materials to 300. In the last Girdwood Report on the cost of building it was stated that the profits of contractors and builders had only gone up by one per cent above what the profits were before the war. Therefore there was no reason to suppose that this schedule was in any way unreasonable. The Government accepted no responsibility for it, however. The really substantial increase in the cost of repairs was due to the easily ascertainable increase in the earnings of those employed in the industry and the great increase in the price of building materials. He had, therefore, no reason to suppose that any exhorbitant charges were being made under this schedule, and as it was a matter of negotiation between two parties in the industry there was no justification whatever for the Government to intervene.





These photographs show the structural steelwork in one of the buildings for a factory under construction in Lancashire.

Architects: Harry S. Fairhurst & Son, Manchester. General Contractors: A. Monk & Co. Ltd., Warrington.

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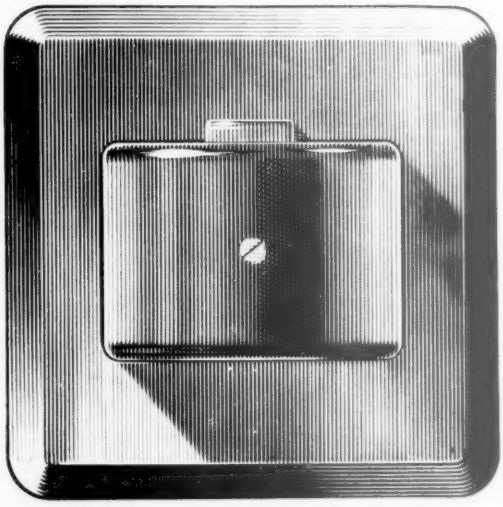

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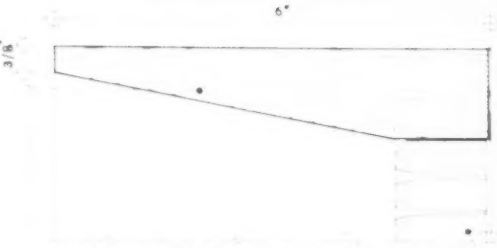
E.10

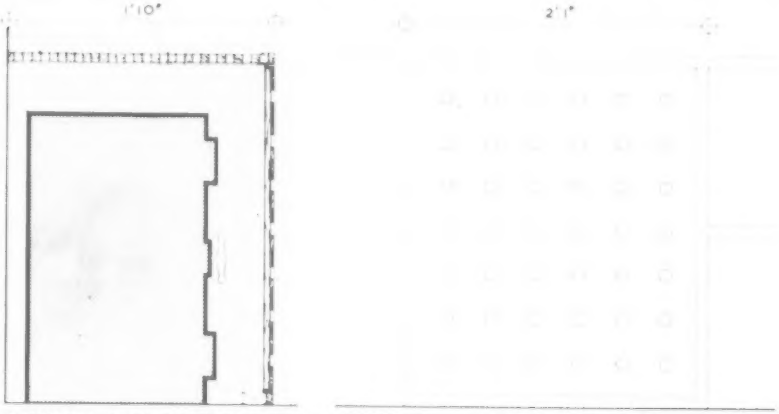
PART ELEVATION OF DISPLAY PANEL



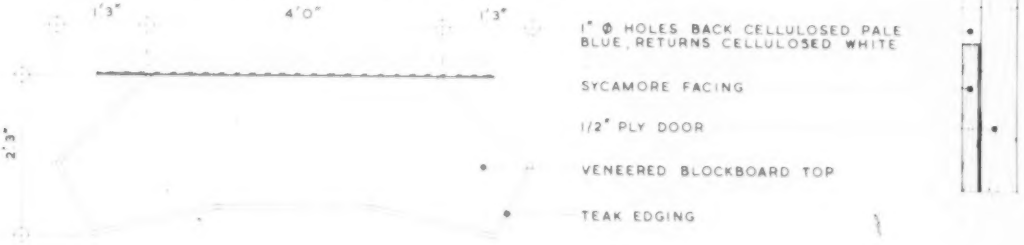
SECTION THROUGH HEAD OF DISPLAY PANEL 1/2 F.S.

FRAME PAINTED GLOSS WHITE

ACOUSTIC TILE BACKING DISTEMPERED WHITE



SECTION & ELEVATION OF CUPBOARD SCALE 1" = 1'0"



PLAN OF TOP

1" Ø HOLES BACK CELLULOSED PALE BLUE, RETURNS CELLULOSED WHITE

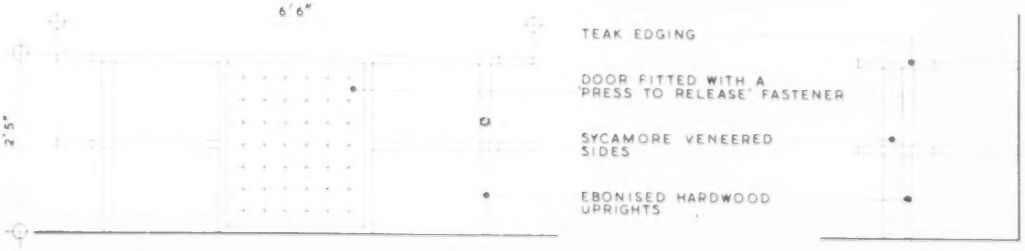
SYCAMORE FACING

1/2" PLY DOOR

VENEERED BLOCKBOARD TOP

TEAK EDGING

NOTE
THIS DISPLAY TABLE WAS BUILT ABOUT AN EXISTING SAFE WHICH WAS BOLTED TO THE FLOOR AND CONSEQUENTLY IMMOVABLE



TEAK EDGING

DOOR FITTED WITH A 'PRESS TO RELEASE' FASTENER

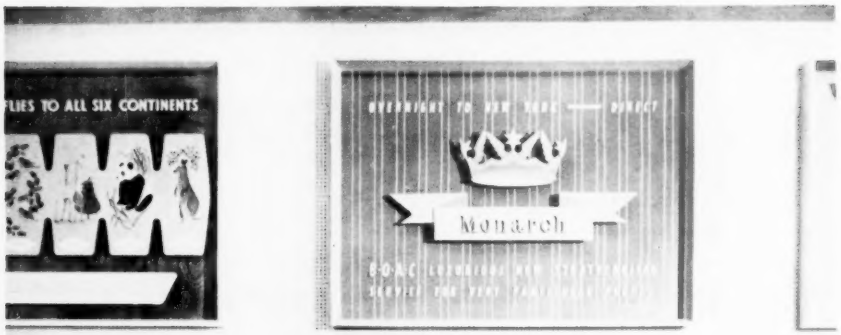
SYCAMORE VENEERED SIDES

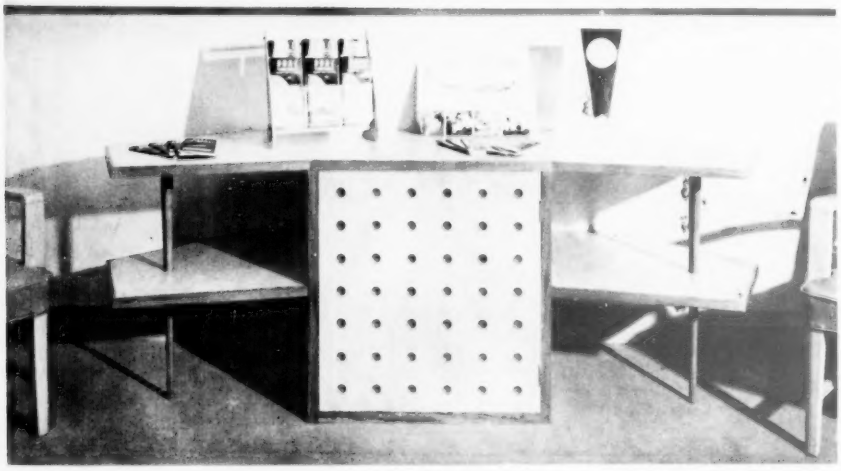
EBONISED HARDWOOD UPRIGHTS

FRONT ELEVATION SCALE 1" = 2'0"

SIDE ELEVATION

DISPLAY & SAFE FITTING, B.O.A.C. BOOKING OFFICE, BIRMINGHAM • DONALD RUMMERY





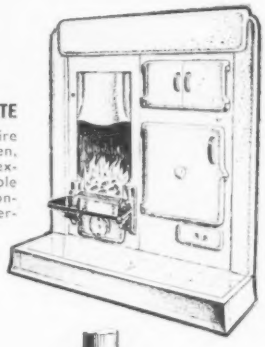
DISPLAY AND SAFE FITTING, B.O.A.C., BOOKING OFFICE

DESIGNER: DONALD RUMMERY

THE ECONOMICAL FOUR

DERWENT COMBINATION GRATE

Efficient and economical fire provides heat for a large oven, fast-boiling hotplate with extension hob; hot closet. Ample domestic hot water and controlled room warmth. Overnight burning.



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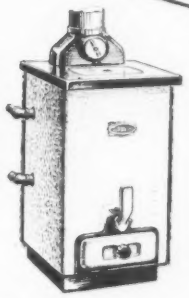
Waterway encircles fire and gives high output per square foot of heating surface. Bright, clean finish, minimum cleaning. B33 has steel water jacket, B.22 cast-iron.



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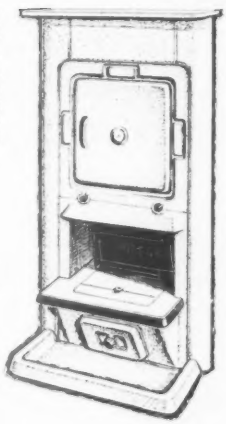

CROMFORD COOKER

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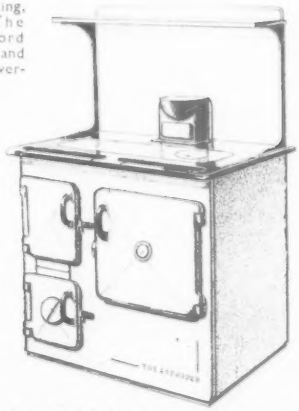

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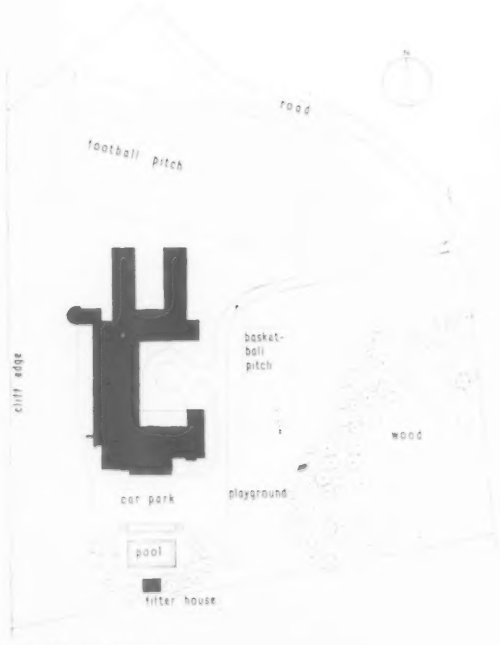
The Camp from South-West

LEEDS CHILDREN'S HOLIDAY CAMP
SILVERDALE

Architect: G. ALAN BURNETT A.R.I.B.A., A.M.I.Struct.E., Dip.Arch.(Leeds)



SITE LAYOUT

PICTURESQUELY situated on top of the cliffs and with extensive views over Morecambe Bay and the distant Lakeland hills, the Leeds Children's Holiday Camp replaces the original wooden and corrugated iron hutments which temporarily occupied the site. The buildings give accommodation for 60 children, who will be recruited from the poorer families of Leeds; girls and boys alternating for a fortnight's holiday each year. Eventually the dormitories will be extended to accommodate a total of one hundred children.

The building is divided into three sections arranged facing outwards round a service court. The central section comprises three large playrooms with sliding folding windows opening on to a covered terrace which terminates in a semi-circular ended projecting library and reading room, all designed to enjoy the maximum sunlight and open views. One of the playrooms is arranged with cinematograph projection for the entertainment of the children. Opposite to these rooms and approached from a separate children's entrance lie the medical inspection rooms, locker rooms and changing rooms.

The northerly section contains two dormitories each for 26 children arranged with windows facing East and

West; linked with these are two smaller infant's dormitories and all are controlled by a central superintendent's room. Opening off the dormitory corridor are lavatories and bathrooms, linen stores, and at the head of the corridor is a shower and changing room for use in connection with the adjoining playing-fields.

The remaining section, approached by the main entrance from the car park, contains a visitor's suite with lounge, bedrooms and bathroom; a large dining-room with large canopied windows facing south and terminating in a wide stone-built flower box; kitchen, larders, cold room and staff-room. There is a tradesmen's covered entrance from the service court, a garage and a private superintendent's entrance leading to his flat on the first floor above the dining-room block. This flat opens on to a spacious roof garden from which adequate supervision of the playgrounds is easily maintained. A wash-house is provided and the heating chamber is situated in the basement of this wing.

The outside playgrounds are going to be laid out with swings, roundabouts, slides and other equipment. A netball court is to be constructed and finally it is intended to build a swimming and paddling pool with changing-rooms, filtration room and spectator's accommodation to the south of the building and on the axis of the main dining-room.

Construction

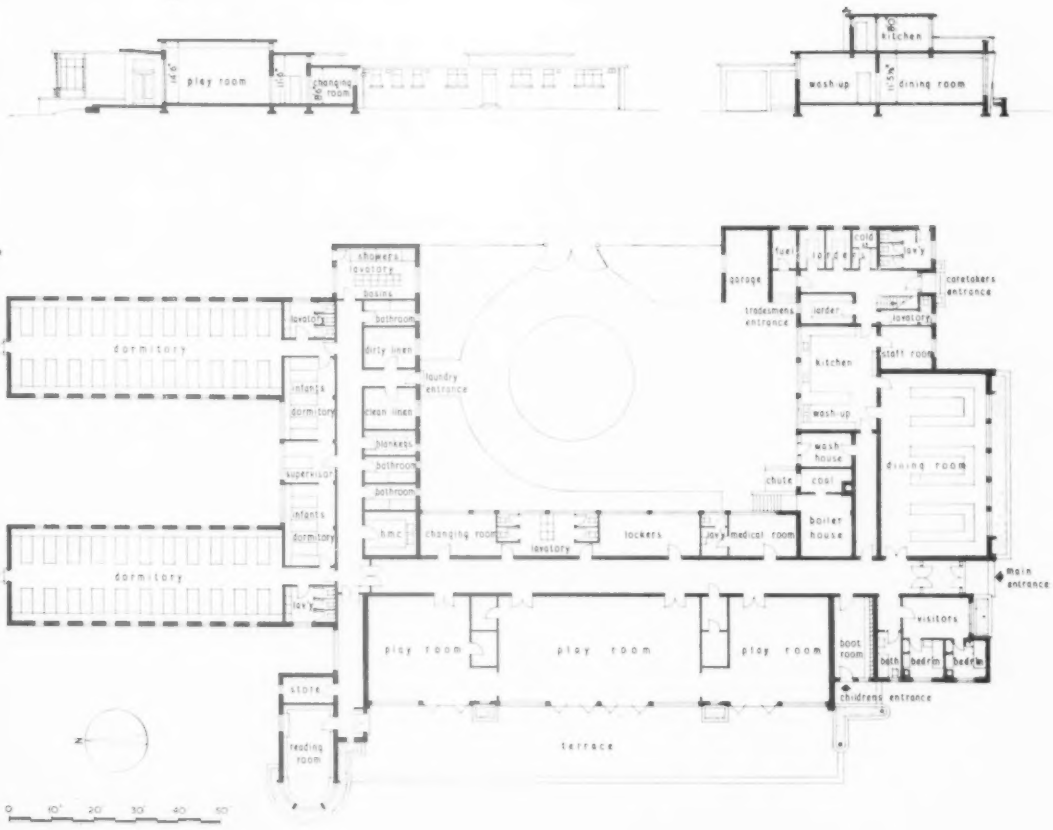
The framework of the building is of reinforced concrete construction with panel walls of brickwork rendered externally in wet dash stucco; the flanking walls of the main front wings are in local uncoursed limestone, whilst copings and cills are in Westmoreland slate, all designed to retain the character of the locality. The flat roofs are of *in situ* concrete covered in bituminous felt with a grey-green mineral finish. Internal walls are rendered in hardwall plaster. The ceilings are covered with fibre board on battens fixed to the underside of the concrete roofs. Large window areas have been provided; those to the playrooms being of the sliding-folding type, whilst clerestory windows to playrooms, corridors, locker rooms, etc., provide ample light and cross ventilation.

The building was erected more or less directly on to solid rock, and in point of fact some of the reinforced concrete columns have had their reinforcements directly attached to the rock in lieu of normal concrete foundations.

Decoration

Particular attention has been paid to the provision of an effective internal colour scheme, in keeping with the purpose of the various rooms, ranging from a quiet treatment in the dining room, of white window wall and ceiling beams, pale green ceiling, lemon yellow rear wall and mushroom end walls; the doors on the yellow wall being in mushroom colour and those on the mushroom walls in yellow, with white architraves. More stimulating treatment in the main playroom consisting of white window walls and beams, pale blue ceiling, grey rear wall with yellow doors, one end wall in brown with grey doors, and the other end wall in yellow with grey doors.

The camp from the North-West showing dormitory wings at the near end, and semi-circular window in the Library.



LEEDS CHILDREN'S HOLIDAY CAMP

Architect: G. Alan Burnett
Quantity Surveyor: Rex Proctor
Electrical Consultants: Callenders Cables Ltd.
General Contractors: R. L. Dilworth Ltd.
Subcontractors:

Bituminous Flat Roof:
The Northern Asphalt & Roofing Co. Ltd.
Central Heating:
Hopes Heating & Engineering Ltd.
Doors:
Alvin Morris Ltd.
Decorative Materials:
The Walpamur Co. Ltd.
Electrical Installation:
N. G. Bailey & Co. Ltd.
Floors, Tiles and Terrazzo Partitions:
The Terradura Flooring Co. Ltd.
Flower Boxes and Garden Layout:
Reginald Kaye Ltd.
Furnishings:
Kidds of The Headrow, Leeds.
Glass Brick Floor Surrounds:
Lenscrete Ltd.
Kitchen and Sanitary Equipment:
Rowe Bros. Ltd.
Metal Windows:
Henry Hope & Sons Ltd.
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Building Byelaws

THE new Model Byelaws have been circulated to the Local Authorities to serve as the basis of their own Byelaw revisions to operate for the next ten years and in addition the new L.C.C. Byelaws are completed. Once again, unfortunately, the two documents show considerable differences and, above all, a very different approach to the subject of control of building. Let us hope that the Local Authorities, who base their Byelaws on the Model Series, will not make too many changes to the circulated document, in order that requirements may be similar throughout as much of the country as possible. Scotland is also preparing a new Model but I have not heard that it is yet circulated.

I have examined the new Model and I find the document, on a first brief review, does not seem to meet the aims which I know that at least some of the interested organizations had in mind when they nominated representatives to serve on the Advisory Committee to the Minister of Housing and Local Government. Admittedly the document is a step in the right direction but it certainly does not fulfil the hopes that many of us had that the Model would be on a completely new basis, as was foreshadowed in the Memorandum in the 1937 Model. I feel that there is an important national prestige value in having good building control; this country led the world until about 1937 when U.S.A., Australia and others started afresh with new ideas. It is time that this country should start to think anew in order that it may again take the lead. I have a feeling that the Ministry, in its haste to issue new Byelaws instead of extending the present ones until a proper new set could be prepared, has completely dominated or at least not made good use of the Advisory Committee. I prefer to say little about the new Model until I have examined it much more carefully except that, although it has introduced the concept of the functional approach to a welcome degree, it remains relatively unchanged in basic form and is therefore somewhat reminiscent of a mock Tudor house. Consequently I propose to use this space in looking to a more distant future.

Now that the Model is issued which fills the immediate hiatus arising from the expiration of the currency of the existing Byelaws it is surely just the right moment to start thinking about the next revision which will come into operation in ten years time. Ten years is not a long period to deal with this matter properly since a very great deal of time and thought will be needed to prepare a new Model if it is to be on the right lines and more especially as it seems possible that certain of the difficulties of producing the right type of Byelaws may arise from the existing legislation under which they are made.

What, therefore, should be the aims of Building Byelaws? Just as the law says you must not steal but does not go into detail so the control of building should tell those who build that they should erect good buildings, designed and built in accordance with current knowledge, and suitably equipped to meet present day conditions, having, if possible, an eye on the future, to safeguard the health and comfort of their occupiers and to prevent the buildings from being unneighbourly. This is a very different approach to that of the past and largely of the present Byelaws as, in essence, these set down what builders must and must not do in a manner which can be restrictive in an unnecessary way.

To obtain the proper aim, Byelaws should be as brief and unrestrictive as possible and should therefore define in functional terms, what is required from those who build, and these functional requirements should be amplified by statements of minimum standards of performance which will meet the functional requirements; the new Model can be interpreted as meeting this but the new material has been woven into the old skeleton. What we need is a new framework on which to build afresh. Model Byelaws entirely on a functional basis, however desirable, would suit only the truly knowledgeable designers and in such a form the Byelaws would leave the door open to advances in knowledge and would give a free rein to the progressive designer but, at the same time, they would control undesirable actions. To meet the needs of the less knowledgeable and those less inclined to calculate their answers to the functional requirements, and we must admit that these may be a high proportion of those responsible for building, it would be necessary to set out detailed clauses indicating what would be acceptable as meeting the functional requirements and the performance standards when well-tried and traditional methods of construction are adopted; it would not be difficult to add the necessary appendices or clauses in the form of "if you do this you will be deemed to have satisfied the functional and performance standard." In some respects, the new Model has gone part of the way towards adopting this functional idea but they are rather lost in the document as a whole.

For many years I have been very firmly of the opinion that we need *National Byelaws* applicable *throughout* England, Wales and Scotland so that the controlling requirements for a building are the same wherever it may be built in these Isles. I am not greatly worried by comments that local conditions need local variations as I feel sure that if *the building control legislation is prepared on the right lines it will take care of any local differences which are truly necessary*. National legislation which eliminated local Acts, such as the London Building Act, could contribute greatly to simplification of building.

I should like to offer a proposal as to the actions which might be taken in order to prepare the right sort of building control. The first need appears to be for the Minister of Housing and Local Government to set up a high level committee, in the nature of a Royal Commission, consisting of a number of independent persons and of representatives of the most interested organizations to consider in what form the control of building should be administered, including in its review the related legislation as well as the Byelaws and Regulations made under existing legislation. This committee should be given not more than two years in which to report on the best form of control of building. From the results of such a consideration it seems very likely that changes in legislation under which Byelaws are made, e.g., the Public Health and related local Acts, would be required in order to achieve an adequate National system of control and National Byelaws. I again stress that we should insist on having National Byelaws applicable everywhere and further I would like to suggest that the Byelaws to operate under the new legislation should preferably be prepared under the auspices of some non-Government body in which all organizations interested in the matter could take part, such as the British Standards Institution. The preparation of Byelaws and Regulations by the National Standards Organization would follow a procedure which has been adopted in a number of other countries and I make this suggestion as I am sure it is better for regulations to be prepared by others than those responsible for their administration. Such Regulations as might be prepared nationally would therefore be administered locally but any variations which are permitted from time to time, because of technical developments, would be approved centrally and be operative everywhere.

My next stage would be to allow two years for the preparation of the National Regulations or Byelaws in the light of the committee report; concurrently with the preparation of the new Regulations it would be necessary to obtain Parliamentary agreement to waive such existing legislation as is necessary and enact the necessary replacement legislation recommended by the committee and then to try out the new National Regulations in a few selected progressive Local Authority areas, some small and some large, for a period of four years. Thus at the end of eight years it would be known if the new type of Legislation, and the Regulations made under it, are workable and such modifications as appear to be necessary could be made in order that they might operate nationally from

the time the existing new Model expires.

I commend this idea to the R.I.B.A., to the Institution of Municipal Engineers and to the National Federation of Building Trades Employers, who, above all, are the bodies concerned with having the right sort of building control. Let them jointly approach the Minister with all the weight they can muster to press for a rapid and immediate examination of the whole problem. I do not think there would be any great difficulty in the preparing of National Regulations by an organization such as B.S.I. which would, through its normal committee procedure, bring together the proper bodies, together with the B.R.S. as technical advisors, capable of drawing up proper and fully workable Model Regulations. The B.S.I. has, in conjunction with the professional organizations and B.R.S., prepared the standards for the materials and has co-operated with them to publish the Codes of Practice. Moreover, it has the easiest access to similar Model Regulations prepared in other countries under the auspices of their fellow standard organizations to serve as a guide, if such is needed. Last but not least, the Codes of Practice, if redrafted on a penal minimum basis, would in themselves be a good step on the road towards the preparation of the necessary Regulations.

DUTCH UNCLE

Legal Note

THE recent majority decision of the Court of Appeal in Birch v. Wigan Corporation indicates that sections 11 and 12 of the Housing Act, 1936, are mutually exclusive. Section 11 empowers a local authority to make a demolition order in respect of an insanitary *house;* whereas section 12 provides that in the case of a part of a *building*, or an underground room, which is insanitary, similar powers as are given under s. 11 may be exercised, subject to the qualification, however, that in such cases a closing order and not a demolition order, may be made.

The Housing Act contains no definition of a "house" or a "building," as such. S. 188 of the Act merely provides in the definition of "house" that it includes "any yard, garden outhouse and appurtenances thereto or usually enjoyed therewith." What Birch v. Wigan Corporation decides is that a "house" is not a "building," so that if some of the houses in a row or a terrace of houses are insanitary, the only action that can be taken by the authority is under s. 11 and not under s. 12. The houses cannot be treated as being part of a building, i.e., part of a terrace or row of houses. In such circumstances, accordingly, the authority, while they may order the demolition of the insanitary house in the row or terrace, cannot order the closing of them.

This restriction on the power of housing authorities in such circumstances may not possibly have been foreseen at the time of the passing of this legislation, and may cause considerable inconvenience to councils, who are faced with the alternative of making the necessary demolition orders and thereby perhaps necessitating the destruction of other fit houses in the terrace, or else of completely foregoing the exercise of their powers. But defects of this sort are to be remedied, not by the courts, but by the legislature.

The grounds on which the court held sections 11 and 12 to be mutually exclusive are of interest. If a "house" was insanitary, s. 11 placed the council under the obligation of putting into motion the statutory procedure under s. 11 and making a demolition order. If a house was to be regarded as "part of a building" then it followed that the authority would have an option of either making a demolition order under s. 11 or a closing order under s. 12, but such an option would be inconsistent with the absolute obligation contained in s. 11 of making a demolition order. Further s. 12 likewise imposed an obligation on the authority to make a closing order in cases to which the section applied, so that if a house could be regarded as "part of a building" there would be two sets of current mandatory obligations in relation to the same premises, i.e., to make a demolition order under s. 12 and a closing order under s. 11 *at the same time*, which would create an impossible situation! Finally, as s. 11 dealt with "houses" the reasonable expectation would be that s. 12 would be dealing with something different from a house, i.e., a building which was not a house, which would thus explain why "house" was used in s. 11, whereas "building" was the expression used in s. 12.

Timber Review

THOUGH the Ministry of Works memoranda No. 4 on the use of timber in building goes even further than previously in its restriction upon softwood uses, yet there is encouragement to the use of hardwoods and plywoods in place of softwood in no less than 46 of the instances where softwood is banned, and in many cases hardwood is the sole substitute proposed. Unfortunately, this means an increase in the cost of building.

Softwood will continue to find its way primarily into housebuilding, judging by the assertion of the Minister of Materials that the rate of housebuilding is to continue and that timber is to be made available for this work. For the future, softwood will be in good supply, but of higher price. Already the trade has over-bought the permitted 500,000 standards licensed for next year by the Government, and soon there will be considerable buying for the next 500,000 standards, which will be licensed shortly.

The rush of buying pushed prices up to £74 a standard for 7in Baltic redwood in the unsorted quality, with the price for fifths as high as £68. This compares poorly with the prices being paid in August, when fifths were sold for £45 a standard. The need for more European timber to counterbalance the heavy Canadian stocks cannot be denied, and this would be more marked in the early part of next year, but these supplies have been obtained at a high price.

There is no prospect that softwood prices will fall before next summer, and an improvement at that stage will depend mainly upon political action. Every indication suggests prices may rise above the present rate of £74 a standard, and freights are certainly getting stronger. The outlook for softwood prices is poor. Stocks will continue to be good, but no prospect exists of any relaxation in consumption licensing.

With hardwoods stocks are heavy and prices still favour the buyer. In native hardwoods there is a slump and most favourable prices can be obtained in some parts of the country. Renewed importing from countries outside the dollar area will be permitted with the beginning of next year, but this is likely to have little effect either upon stocks or prices.

Plywood stocks continue heavy and prices are depressed. Plywood holders can now buy from Timber Control in the grades they wish, without being forced to take a proportion of low grades. This may well mean a further decrease in price for the poorer qualities. No scheme has yet been formulated for private buying from the major suppliers for 1953.

A similar position exists with building boards, and here the overseas organizations have linked with the firms in this country to sponsor a development fibre building board section which will boost these boards at a cost of £30,000 a year.

The case submitted to the Government by the timber trade for the wider use of timber in place of steel, concrete and aluminium in building, as being the largest sources of substitutes for timber, has been rejected, it is understood. While agreeing to allow the use of timber wherever possible, the Government refused to permit larger expenditure of foreign currency for softwood imports to save in the use of substitutes at the present time.

L.C.C. Brixton School of Building

In connection with the revision of the London Building (Constructional) Byelaws, 1952, the Brixton School of Building, Ferndale Road, S.W.4, is organizing a special course of four weekly lectures commencing on Thursday, January 8, 1953, at 6.30 p.m. The lecturer is Mr. M. C. G. Ayre, B.Sc.(Eng.), A.M.I. Struct.E. The fee for the course is **£1.**

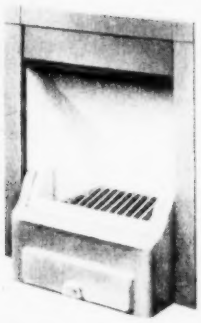
SERVICES
HEATING
B3.29

A new inset fire for economical continuous burning. The Loray fits a standard 16in opening but the bottom grate design is adaptable to variations in width of fire back and depth of opening.

Continuous burning for a minimum of 10 hours is ensured by the addition of a special extension plate which also acts as a trivet.

If overnight burning is not required built-in gas ignition can be used. Finish may be in black porcelain enamel, or brick or fawn mottle, or copper or fawn lustre.

The prices are £3 for the black, brick, mottle and fawn mottle and £3 6s. for the lustre models. Gas ignition is 3s. 3d. extra and the trivet extension plate for use with back boiler is 11s. 3d.



SERVICES
HEATING
B3.30

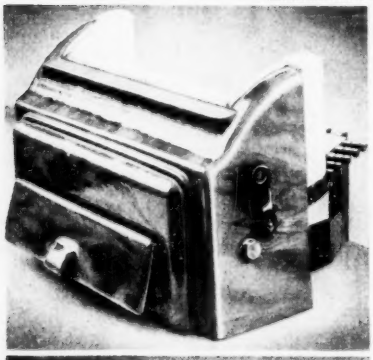
This fire, known as the "Calesto 2in" has a relatively low front—the aim being to improve the appearance. The interior frame is designed to fit a tiled surround of a 16in fire opening.

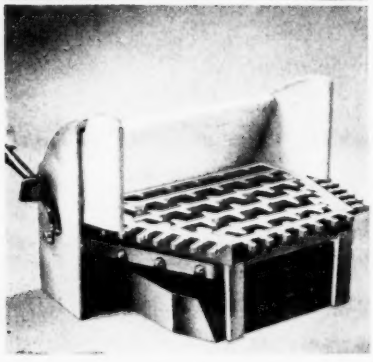
The throat is restricted by a canopy to reduce heat loss. This canopy is adjustable and can be removed to give access to the chimney. The fire back is scientifically designed to throw the heat into the room and the low front gives increased radiant warmth at near floor level.

Recommended fuels are house coal from doubles upward and gas coke of 1in to 2in size. The fire has passed Ministry of Fuel tests on Gas Coke.

Overall dimensions of the interior are 20in wide x 25in high, with a height to the top of tiling strip of 24in.

The interior firegrate unit comprising the fire with ashpan and operator and the sectional brick back costs £7 15s. (at time of writing) in black vitreous enamel or mid-stone mottle. Tile effect enamel finish cost £8 10s.





SERVICES
HEATING
B3.31

These two illustrations show a new continuous burning fire with a shaker bottom grate.

A primary cause of sluggish burning in this type of fire is ash accumulation. Poking is not always a thorough remedy and often leads to waste of fuel. The shaker ensures ash clearance without pushing live fuel into the ash pan.

The shaker is simply operated by an operating tool which engages a lever at the side of the grate. This lever is connected to an operating rod below the grate (see lower picture). Air control is by means of a hinged flap incorporated in the removable front.

The grate is tapped and fitted for gas ignition.

The fire fits standard 16in openings and the adjustable bottom grate will fit all fire-backs which come within the following dimensions: width between fire brick cheeks at front—maximum 14¼in, minimum 12¾in. Width between fire brick cheeks at back—maximum 10¼in, minimum 8in. Depth from front face of fire brick to back—maximum 7in, minimum 6¾in.

Various finishes are obtainable varying in cost from £4 10s. for black vitreous enamel to £5 7s. 6d. for coloured lustre finishes.

MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to :

The Editor,
The Architect and Building News,
Dorset House,
Stamford Street, S.E.1.

Please mark the envelope MOSAICS.

WATER SUPPLY

The Council for Codes of Practice for Buildings has now issued in final form Code 310 "Water Supply." It has been drawn up by a committee convened by the Institution of Water Engineers on behalf of the Council, and is a revision, following comments received, of the draft code previously issued.

This Code deals with water supplies to all types of buildings, either directly from wells, boreholes, rivers and similar natural sources, or through the agency of a Public Water undertaking. The Code strongly recommends that, in all but the simplest cases of connection to a water undertaking's mains, expert advice should be obtained when choosing the source of supply and planning the system.

The Code carries the usual warning that, in the present abnormal conditions, it may not be practicable to carry out all the recommendations. Copies may be obtained from the British Standards Institution, 24/28, Victoria Street, London, S.W.1, price 6s post free, reference CP310 (1952).

* * *

The British Standards Institution has recently published the revised British Standard for Glossary of Terms (with Symbols) Relating to the Welding and Cutting of Metals (B.S.499:1952). The considerable increase in the application of welding which resulted from the war and the many new techniques developed since the 1939 edition of B.S.499 have necessitated a much more comprehensive treatment of the subject than was given previously.

The standard also includes the publication known previously as B.S.449, Part 2, which deals with those terms relating to imperfections in welds which are appropriate for radiographic examination.

The entire publication is fully illustrated with sketches and line drawings: the section on radiographic examination includes reproductions of radiographs and the scheme of symbols is profusely illustrated with examples showing its application. An interesting item is a chart showing the derivation of the various welding and cutting processes. The publication is completed by means of a fully cross-referenced index of all terms dealt with.

Copies of this standard may be obtained from the British Standards Institution, Sales Branch, 24, Victoria Street, London, S.W.1. Price 21s.

CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

BERKSHIRE AND READING FIRE AUTHORITY. (a) Building 30ft long × 36ft 6in wide × 15ft at the Fire Station, Northumberland Avenue, Reading. (b) Borough Architect, Town Hall, Reading. (e) Dec. 5.

* * *

BLANDFORD R.C. (a) (1) 10 houses, 3 garages and site works at Hilton and (2) 2 houses, 3 garages and site works at Tarrant Gunville. (b) E. A. Down, 47, Boscombe Overcliff Drive, Bournemouth. (c) 2gns. (e) Dec. 9.

* * *

BOURNEMOUTH B.C. (a) 6 blocks of 4 flats, Leybourne Estate. (b) Borough Architect (Room 106), Town Hall. (c) 2gns. (e) Dec. 9.

* * *

BRIERLEY HILL U.C. (a) 91 dwellings in groups on the Swan Lane Estate. (b) Council's Architect, Council Offices, Moor Street. (c) 2gns. (d) Dec. 1.

* * *

BURY B.C. (a) School kitchen with water tower and pump house, etc., at Bircle Primary School. (b) Borough Engineer, Town Hall. (c) 1gn. (e) Dec. 8.

* * *

CANVEY ISLAND U.C. (a) (1) 3 bungalows at Mornington Road, Site 9; (2) 3 bungalows at Mornington Road, Site 10; (3) 2 blocks of 3 bungalows at Holbeck Road, Site 1. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) Dec. 9.

* * *

CHERTSEY U.C. (a) (1) 8 houses, 10 flats and 8 garages with outhouses, paths, drainage, etc.; (2) demolition of Lasswade House and (3) diversion of existing 36in surface water culvert for Lasswade development. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) Dec. 9.

* * *

CHESTER C.C. (a) 11 shops, 9 maisonettes, 4 flats and 11 garages comprising shopping centre, Blacon Estate. (b) City Engineer, Municipal Offices, 43, Northgate Street. (d) Dec. 8.

* * *

CREDITON U.C. (a) 10 houses at Spruce Park. (b) Messrs. F. W. Beech and E. Curnow Cooke, 15, Dix's Field, Exeter. (c) 2gns. (e) Dec. 20.

* * *

DARTMOUTH B.C. (a) Demolition of 4, 6, 8, Clarence Street and erection of 2 houses, etc. (b) Borough Engineer, 12, Victoria Road.

* * *

EAST RIDING C.C. (a) Ambulance station at Hessle. (b) County Architect, County Hall, Beverley. (c) £2. (e) Dec. 22.

* * *

EIRE—BRAY U.C. (a) 98 houses at Old Connaught. (b) Town Clerk, Town Hall. (c) 10gns. (e) Dec. 20.

* * *

EIRE—DUBLIN CORPORATION. (a) 412 houses, Ballyfermot housing area, Sections 3B and 3C. (b) City Treasurer, Exchange Buildings, Lord Edward Street. (c) 5gns. (e) Dec. 17.

* * *

EIRE—TRALEE U.C. (a) 40 houses, construction of roads, sewers, footpaths and water mains, Spa Road, Tralee. (b) Council's Clerk, Council Chambers. (e) Jan. 13.

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ELLESMERE PORT U.C. (a) Civic hall. (b) Messrs. Gornall, Kelly and Partners, 69, The Albany, Old Hall Street, Liverpool 3. (c) 5gns payable to Council. (d) Dec. 1. (e) Dec. 22.

* * *

ESHER U.C. (a) (Contract No. 122) 6 old people's bungalows, Winston Drive Estate, Stoke D'Abernon. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) Dec. 19.

* * *

ESSEX C.C. (a) Adaptations at Clacton-on-Sea secondary school (approx. value of contract £3,000). (b) County Architect, County Hall, Chelmsford, with full details. (d) Dec. 3.

* * *

HARROW U.C. (a) War damage repairs and decorations to houses at (1) Woodlands Drive, Stanmore; (2) Wolverton Road, Stanmore; and (3) North Harrow. (b) Engineer and Surveyor, Council Offices, Stanmore, stating site. (c) 1gn each site, crossed cheque payable to Council. (e) Dec. 22.

* * *

HERTFORD B.C. (a) Conveniences and store at "Wallfields," Pegs Lane. (b) Borough Engineer, Municipal Offices, The Castle. (c) 2gns. (e) Dec. 10.

* * *

LONDON—CAMBERWELL B.C. (a) Repair of war-damaged masonry and brickwork, etc., at Town Hall. (b) Borough Engineer, Town Hall, S.E.5. (e) Dec. 15.

* * *

LONDON—HENDON B.C. (a) Adaptation of prefabricated huts adjacent to Orange Hill Grammar School, Burnt Oak. (b) Borough Engineer, Town Hall, N.W.4. (c) 2gns. (d) Dec. 3.

* * *

LONDON—WANDSWORTH B.C. (a) Reinforced concrete framed and brick-cladded structures for 3 blocks of flats, Wimbledon Park Estate. (b) Town Clerk, Municipal Buildings, S.W.18, with details of experience, plant, technical and supervisory staff available and names of 2 technical and 2 financial referees. (d) Dec. 3.

* * *

MELTON MOWBRAY U.C. (a) 120 houses, Dorothy Avenue. (b) Engineer and Surveyor, Egerton Lodge. (c) 2gns. (e) Dec. 31.

* * *

MORLEY B.C. (a) 32 houses, Bruntcliffe Lane. (b) M. H. Brook, National Provincial Bank Chambers, Queen Street. (c) 2gns. (e) Dec. 12.

* * *

NEWPORT (ISLE OF WIGHT) B.C. (a) 20 houses, Pan Estate. (b) Borough Engineer, 39, Quay Street. (c) 2gns. (e) Dec. 15.

* * *

N. IRELAND—BELFAST C.C. (a) Sub-station building at Whitewell, Belfast. (b) Electricity Department, East Bridge Street. (c) 2gns. (e) Dec. 5.

* * *

NORTHAMPTONSHIRE E.C. (a) Additional block of teaching rooms at Towcester County Modern School. (b) County Architect, County Hall, Northampton. (d) Dec. 2.

* * *

NORTHAMPTONSHIRE STANDING JOINT COMMITTEE. (a) 3 pairs of houses, Grange Estate, Stamford Road, Kettering; 1 pair of houses, Oundle, and 2 pairs of houses at Wootton Hall, near Northampton, for police. (b) Committee's Clerk, County Hall, Northampton, stating sites. (d) Dec. 2

* * *

NOTTINGHAMSHIRE C.C. (a) Secondary school at Hucknall Ruffs Farm. (b) County Architect, County Hall, Trent Bridge, Nottingham. (c) 2gns. (d) Nov. 29.

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NUNEATON CO-OPERATIVE SOCIETY, LTD. (a) Branch stores at Wood Street, Nuneaton. (b) Messrs. H. N. Jepson and Partners, Midland Bank Chambers, Newdegate Place. (c) 2gns. (e) Dec. 12.

* * *

PEMBROKE B.C. (a) 50 houses and flats, Cross Park, Pembroke Dock. (b) W. B. Kavanagh, Municipal Offices, Bush Street, Pembroke Dock. (c) 5gns. (e) Dec. 8.

* * *

PICKERING R.C. (a) 2 houses at Ebberston, 4 houses at Wilton and 8 houses at Thornton Dale. (b) Council's Clerk, 20, Eastgate. (c) 2gns. (e) Dec. 6.

* * *

SAFFRON WALDEN R.C. (a) 20 houses at Chrisall. (b) Council's Clerk, Council Offices, Debden Road. (e) Dec. 6.

* * *

SCOTLAND—GLASGOW CORPORATION HOUSING DEPARTMENT. (a) (1) 16 aged persons' flats in 4 blocks at Kerrera Place, Barlanark, and (2) 36 aged persons' flats in 9 blocks at Scaraway Place, Milton (b) Director of Housing, Second Floor, 20, Trongate, Glasgow, C.1. (e) Dec. 8.

* * *

SCOTLAND—WEST LOTHIAN C.C. (a) Houses on various sites during 1953. (b) County Clerk, County Buildings, Linlithgow; stating trade or trades for which schedules required. (d) Dec. 17.

* * *

SOMERSET C.C. (a) Extensions to Bournville Junior School, Weston-super-Mare. (b) County Architect, Park Street, Taunton, with particulars of financial and material resources and organisation. (c) 2gns. (d) Dec. 1.

* * *

SUFFOLK AND IPSWICH FIRE AUTHORITY. (a) Fire station at Station Road, Clare. (b) E. J. Symcox, County Hall, Ipswich. (c) 2gns. (d) Dec. 1. (e) Dec. 22.

* * *

WALTON AND WEYBRIDGE U.C. (a) 3 shops with flats above, Longmore Farm Estate. (b) Engineer and Surveyor, Council Offices, Walton-on-Thames. (e) Dec. 13.

* * *

WELWYN R.C. (a) 1 pair of aged persons' bungalows, Bridge Road, Woolmer Green, Knebworth. (b) Council's Surveyor, Council Offices, By-pass-road. (c) 2gns. (e) Dec. 10.

* * *

WEST RIDING C.C. (a) Conversion into 3 flats of the Nurses' Home, 91, East Parade Harrogate. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (e) Dec. 9.

* * *

WEST RIDING STANDING JOINT COMMITTEE. (a) 2 houses at Broomfield Lane, Stocksbridge, 4 houses at Horse Close Estate, Skipton, 1 house and office at Greenside Lane, Cullingworth, and 2 houses on the Manor Fields Estate, Horbury. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2gns. (e) Dec. 19.

* * *

WEST SUFFOLK STANDING JOINT COMMITTEE. (a) (1) 1 pair of houses at Houldsworth Valley, Newmarket, (2) House and office at Stoke-by-Nayland, and (3) house and office at Stradishall. (b) County Architect, 13, Westgate Street, Bury St. Edmunds. (d) Dec. 2. (e) Jan. 14.

* * *

***WORKSOP B.C.** (a) Block of 6 shops and maisonette flats, Manton Housing Estate. (b) Town Clerk, Town Hall. (c) 5gns. (d) Dec. 1. See page 31.

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WORTLEY R.C. (a) Block of 4 shops with flats above and basement garages, Lane End Estate, Chapeltown, near Sheffield. (b) Messrs. Husband and Co., 388, Glossop Road, Sheffield, 10. (c) 3gns. (e) Dec. 19.

* * *

WREXHAM B.C. (a) Community centre at Kingsley, Queen's Park Estate. (b) Borough Engineer, 31, Chester St. (c) 2gns. (e) Dec. 11.

PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. † denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

BUILDING

MITCHAM B.C. (1) 66 maisonettes. (2) Baron House Estate. (3) E. H. Smith (Croydon), Ltd., 48, Wellesley Road, Croydon. (4) £157,020.

* * *

OXFORD CITY COUNCIL. (1) 100 dwellings. (3) F. J. Minns and Co., Ltd., 67, St. Aldate's, Oxford. (4) £139,457. (1) 48 dwellings. (3) A. J. Robey, Rowstock, Didcot. (4) £65,954. (1) 24 dwellings. (3) W. H. Poulton, 98, Steventon Road, Drayton. (4) £29,795.

* * *

BRITISH ELECTRICITY AUTHORITY. (1) Foundation works, aqueducts, etc. (2) New power station, Castle Donington, Derbyshire. (3) Taylor Woodrow Construction, Ltd., Southall, Middlesex. (4) £1,500,000.

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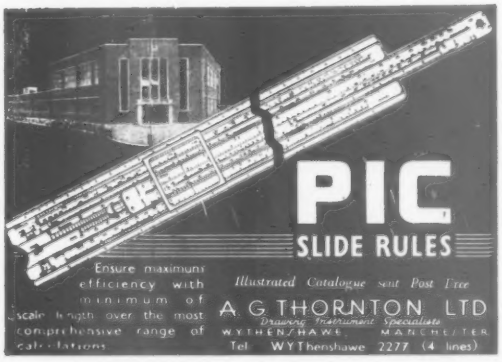
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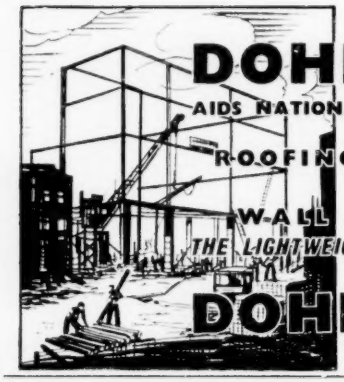

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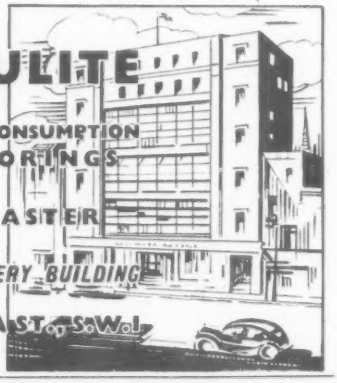

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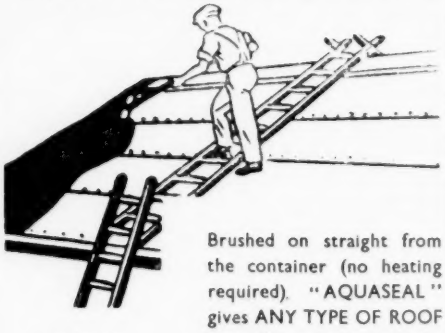

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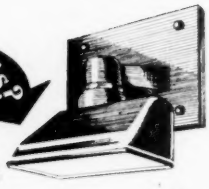

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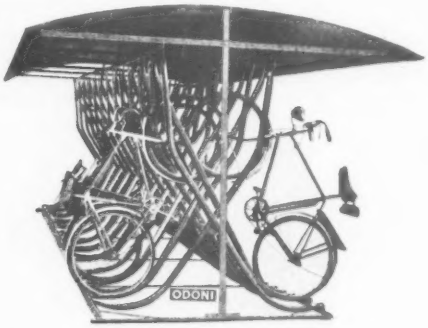

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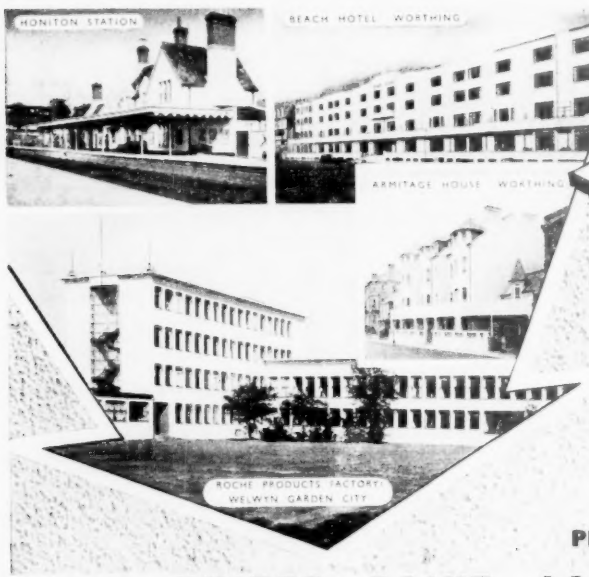

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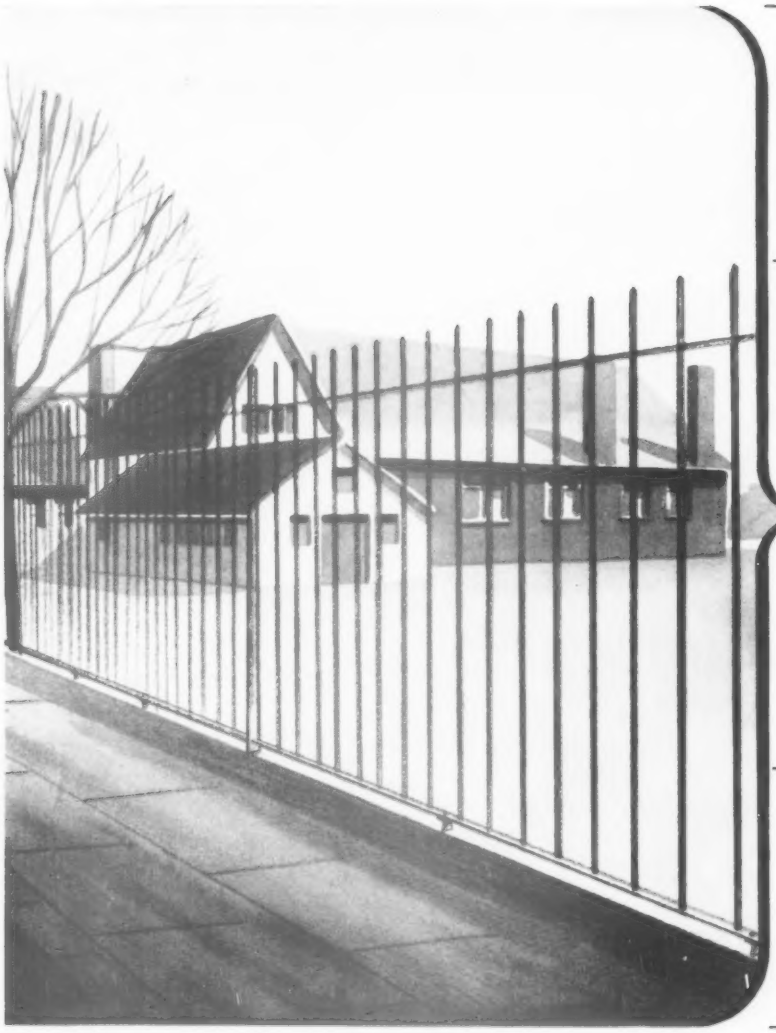

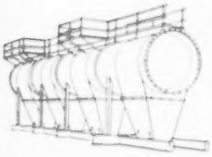

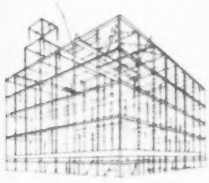

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